SHELTER POPULATION

HEALTH STATUS STUDY

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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SHELTER POPULATION HEALTH STATUS STUDY

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by

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Health Mobilization

OCD REVIEW NOTICE

This report has been reviewed in the Office of Civil Defense and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Office of Civil Dafense.

ABSTRACT

This study shows the nature and extent of chronic, acute and incapacitating conditions in the national population which will be affected by adverse shelter environmental factors. It was undertaken to indicate the nature and extent of such conditions which may be expected in the shelter population and to help emergency planners prepare shelters with adequate supplies, equipment, facilities and personnel to insure the best possible health of all persons.

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PREFACE

The purpose of shelters is to save lives in case of enemy attack by protecting people from radioactive fallout and other effects of nuclear warfare. However, if there are extremely adverse environmental conditions in shelters, more people could die or be incapacitated from shelter confinement than from exposure to nuclear effects. Adverse shelter environment is one in which there is a high temperature, high humidity and limited air, either one or all of these factors existing at one time. Shelter planning, therefore, must provide environmental control to ensure the greatest possible safety for the general public.

In February 1962, the Division of Health Mobilization under contract with the Office of Civil Defense, Department of Defense, undertook a study (defined in OCD Work Order No. OCD-OS-100) to:

> "determine and identify potential medical problems over a range of possible conditions of occupancy in group shelters; and to review applicable experiences and recommend environmental limits, necessary management techniques and facilities and required medical supplies and procedures."

The study covers three parts:

1. Medical Care in Shelters. A manual for allied health workers and selected trained laymen, prepared by the Public Health Service, Division of Health Mobilization, Training Branch. (Published December 1963.)

2. Evaluation of Thermal Environment in Shelters. A study of the effects of adverse shelter environment on occupants to determine the nature and degree of conditions that may occur during confinement. This involved:

   a) A study of the physiological and clinical effects of environmental factors, conducted by the Public Health Service, Division of Occupational Health, Cincinnati, Ohio (Report No. TR-?, August 1963).

   b) A survey of selected hospital records on heat syndrome admissions in the vicinity of New Orleans, Louisiana, to determine the physical status of the patients and environmental conditions at the time

of admittance. The survey was conducted by Drs. James A. Meyers and Mario A. Calonje, graduates of the Louisiana State University School of Medicine.

3. Shelter Population Health Status Study. A study to determine the nature and extent of chronic, acute and incapacitating conditions in the national population which will be affected by adverse shelter environmental factors. This study was undertaken to help emergency planners prepare shelters with adequate medical supplies, equipment, facilities and personnel to ensure best possible health of all persons.

The following report, Part 3 above, provides detailed information on the prevalence of selected conditions known to be adversely affected by thermal environment and certain other incapacitating illnesses within the population which would also be adversaly affected by shelter habitation, reflecting the number of persons affected in each type of condition.

The report points out the limitations of source data, identifies specific needs for additional source information, recommends means of obtaining this, and outlines methods for updating current data on health trends.

DEFINITION OF CERTAIN TERMS USED IN THIS REPORT

Chronic Illness

In terms of the National Health Survey reports, an illness is considered chronic if it is reported as having been present for more than three months, or if it is described in terms of chronic condition and impairment, regardless of how long the condition has existed.

Conditions classified as chronic are:

- Asthma
- Hay Fever
- Tuberculosis
- Chronic Bronchitis
- Repeated Sinus Attacks
- Rheumatic Fever
- Hardening of the Arteries
- High Blood Pressure
- Heart Trouble
- Stroke
- Varicose Veins
- Hemorrhoids - piles
- Tumors, Cysts or Growths
- Chronic Gall Bladder or Liver Trouble
- Stomach Ulcers
- Other Chronic Stomach Troubles
- Kidney Stones or Chronic Kidney Trouble
- Arthritis or Rheumatism
- Mental Illness
- Diabetes
- Thyroid Trouble or Goiter
- Allergies
- Epilepsy
- Chronic Nervous Conditions
- Chronic Nervous Conditions
- Cancer
- Chronic Skin Trouble
- Hernia or Rupture
- Prostate Trouble

Impairments

"Impairment," as used in the U.S. National Health Survey, refers to certain chronic or permanent defects, disabling or not, representing a decrease or loss of ability to perform certain functions, particularly those of the muscular-skeletel system, and special senses. Impairments are restricted to conditions included in the classifications of impairments (referred to as the X-code) and are coded by type, site, and etiology according to that classification (Ref. 15e, page 19).

Acute Illness

An acute condition is defined as a condition which has lasted less than three months and which has involved either medical attention or restricted activity.

Environment

Environment relates to the factors surrounding or affecting human behavior, health or welfare. In a fallout shelter this would include temperature, humidity, water, light, food, physical and social surroundings.

Prevalence

As used in this report, prevalence refers to the numerical findings of a condition at the time of investigation.

Incidence

Refers to the number of occurrences of a specific condition within a specified period of time.

INTRODUCTION AND SUMMARY

Purpose

This report was prepared in response to an Office of Civil Defense request for factual information on the extent and nature of acute and chronic illness within the population that would cause medical concern in a shelter environment. The specific need for this data was to anticipate, insofar as possible, the amount or degree of disability that might be anticipated in an average mixed civilian group that will enter an area fallout shelter, in order to prepare shelters with adequate space, supplies, equipment, facilities, and health manpower to insure maximum health and survival of all persons.

Scope

Although the OCD Work Order specifically called for a study to determine those incapacitating conditions "affected by the environment within the population," it was assumed that the real objective is:

1. To determine the current health status of the national population groups on whom the extremes of temperature, humidity and other variables will be acting.

2. To place in proper perspective the acute, chronic and debilitating conditions as they will affect persons of all ages under shelter environmental conditions.

3. To determine those acute and chronic illnesses which are adversely affected by high temperature, high humidity, lowered oxygen and restricted water and food intake.

4. To determine the nature and extent of all other incapacitating conditions which in themselves, or combined with adverse environmental factors, would severely affect shelter habitation. For example, the blind, the crippled, bed-ridden, infirm and sickly may not be able to adapt to the environment -- or even reach shelter without assistance.

Variables to be Considered

In the event of nuclear disaster not only normal healthy individuals but the sick and physically handicapped as well will probably seek shelter, planned or improvised. Shelter planning must, therefore, include medical supplies, equipment, facilities, and health manpower to insure maximum health and survival for all persons in all areas of the country at any time of year.

Ideally, planning would be based on knowledge of the size and mix of population groups that will enter a given shelter at the time of attack. However, precise prediction of such figures is impossible. The exact time, nature, period of warning (if any) or target area is unknown. The population mix will vary according to all of the following:

1. Time of Attack - the day of the week and hour of attack will determine the location or concentration of people in certain areas, i.e., industrial, school, residential, recreation.

2 Month of the Year - the season has a direct influence on the probable population mix in a shelter and on the incidence or prevalence of certain illnesses. For instance, if an attack occurs during school vacations, there will be comparatively few children in school shelters and large numbers in residential area shelters. The season also influences the incidence or prevalence of acute respiratory conditions associated with influenza-like epidemics.

3. Geographical Area of Attack - in addition to varying weather conditions, health characteristics of a shelter population may vary according to the geographical area, especially insofar as the distribution of the chronically ill or incapacitated are concerned. For example, Florida contains concentrated areas of retired and aged persons. Its shelter populations will, therefore, have a disproportionate number of persons with heart disease, high blood pressure and other chronic diseases as compared to areas with a lesser percentage of aged. In fact, the nature and extent of health conditions in any area will be in direct relationship to the age and sex characteristics of the population.

4. Period of Warning - the length of time between warning and attack (if any) will influence the number and types of persons who will reach shelter. If there is little or no warning, many physically handicapped, blind or otherwise restricted in mobility will never reach shelter.

Considering all of the above factors, it is evident that the nature and extent of morbidity and mortality in shelters in any area at any time will depend largely on the physical and health characteristics of the population at the time of entry. It is important that an attempt be made to estimate, insofar as possible, what the situation may be. This phase of the shelter environmental health study is directed to that end.

Procedure and Method

It was necessary to determine, insofar as possible, those specific medical and other incapacitating conditions likely to be adversely affected by austere environmental factors in shelters. This proved difficult because of limited information. A comprehensive search for sources of reliable data on human tolerance to environmental effects, as well as respective morbidity rates, was initiated. This search covered Government agencies, libraries, private foundations, universities, research institutes, and numerous other sources. The resulting reference material is now a part of the Division of Health Mobilization reference library.

Although, as evidenced by the bibliography (Appendix I) and Dr. Lee's report on thermal environment in shelters (Ref. 16), considerable material has been published on human tolerance to various environmental factors, unfortunately, most of the literature reporting experiments in environmental stress is relevant only to healthy persons - usually young males. The same applies to shelter habitation studies.

Much needed specific information concerning the effects of shelter confinement on persons afflicted with various categories of acute, chronic or incapacitating conditions is lacking. Nevertheless, on the basis of published reports on factors which had been observed to alter the normal responses to thermal stress, the following eleven broad condition groups (Ref. 16, pp. 27, 28, 33) were selected:

1. Infants
2. 45-65 age group
3. 65 and over age group
4. Obesity
5. Non-acclimatized
6. Insufficient fluid intake
7. Metabolic disorders
8. Dermatologic disorders
9. Cardiopulmonary disorders
10. Gastrointestinal disorders
11. Psychological disorders

Significant effects of thermal environment on the above condition groups are reported by Drs. Lee and Henschel under the respective subject headings in Evaluation of Thermal Environment in Shelters (PART II of the overall study).

Since the above study showed that there is no data relative to the effects of actual shelter environment on these condition groups, it was not possible to determine the prevalence of specific incapacitating conditions known to be affected by shelter environment. Therefore, a study was made to determine the prevalence of all leading causes of disability within the population as a whole. These conditions, as reported in 1963 by the National Health Education Committee (Ref. 19) are:

1. Arteriosclerosis (main cause of heart attacks and strokes) and other heart diseases - the No. 1 cause of death.

2. Mental Illness - schizophrenia, drug addiction, alcoholism, acute depressions, mental retardation.

3. Arthritis and Rheumatic Diseases

4. Metabolic Conditions - diabetes; cirrhosis and other liver diseases; diseases of the blood; anemia; disorders of bone metabolism; malfunctions of the endocrine glands; digestive diseases, such as ulcers, colitis, ileitis, diverticulosis; kidney stones, and diseases of the kidneys.

5. Neurological and Sensory Diseases - epilepsy, Parkinsonism, multiple sclerosis, muscular dystrophy, cerebral palsy; and major eye diseases, such as glaucoma, cataracts, uveitis, diabetic retinopathy, detached retina, etc.

6. Virus Diseases - hepatitis, new forms of influenza, colds.

7. Allergic Diseases - asthma, hay fever, allergic rhinitis, drug allergies, serum sickness, and allergic skin disorders.

A conscientious effort was made to provide morbidity data on all such conditions. The problem of interpretation of the vast and scattered source data was compounded, however, by the diverse forms of data presentation. Different criteria are employed in the classification of health status of individuals. Various studies have used a wide range of terms and definitions for the same or similar conditions so that comparability among them has been lost.

No uniform system of reporting or recording of morbidity data exists, compounding the problem of this report . Only acute communicable diseases are reportable by law and even these laws vary between States. There was no regular collection of data on the prevalence of chronic illness prior to 1956. Since that time, limited data has been collected through the National Health Survey, established under the National Health Survey Act (PL 652, 84th Congress) of 1956. The Act authorized the Surgeon General of the Public Health Service to make surveys and special studies of the population of the United States to determine the extent of illness and disability. The Surveys, which began in 1957, have since been used as a basis for reporting health conditions relative to all health program needs.

Evaluation of Source Data Selected

The National Health Survey, as described by the Committee on Labor and Public Welfare, Subcommittee on Problems of the Aged (Ref. 1) is "the Nation's most reliable source of knowledge concerning the health status of all age groups. It consists of interviews in households selected on the basis of the most sophisticated scientific techniques of sampling and interviewing. For example, in a 24-month period ending in June 1959, the Survey covered about 235,000 individuals from 73,000 households. The research design allows for a continuous measurement of a wide number of health characteristics .... Further, except for exclusion of decedents and the institutionalized, the survey represents all segments of the country's population. Every segment, in terms of region, urban-rural residence, etc., is properly represented ...."

The National Health Survey was created by Congress to provide accurate and reliable knowledge on the health conditions and related characteristics of the American people. Its methods and techniques are of the highest quality known in the field of survey sampling science.

Although the information is limited by certain factors -- the exclusion of institutionalized individuals and uniform reporting by age groups -- it is the most reliable and suitable data available to meet national disaster health planning. (The NHS is currently conducting a study on institutionalized individuals.) This data is the basis for Part II, Section I of this report. Figures include health conditions for the four major regions of the United States -- Northeast, North Central, South and

West, urban and residential areas, with separate classifications for age and sex. The condition groups included are:

1. Chronic Conditions

   Heart Conditions
   High Blood Pressure
   Diabetes
   Peptic Ulcer
   Arthritis & Rheumatism
   Hernia
   Asthma-Hay Fever
   Chronic Bronchitis
   Chronic Sinusitis
   Visual Impairments
   Hearing Impairments
   Paralysis of Major Extremities
      and/or Trunk

2. Acute Conditions

   a. Infectious and parasitic diseases

      (1.) Common childhood diseases
      (2.) The "virus" (not otherwise specified)
      (3.) Other infectious and parasitic diseases

   b. Upper respiratory conditions

      (1.) Common cold
      (2.) Other acute upper respiratory conditions

   c. Other respiratory conditions

      (1.) Pneumonia
      (2.) Bronchitis
      (3.) "Intestinal flu"
      (4.) Influenza and other respiratory conditions

   d. Digestive system conditions

      (1.) Dental conditions
      (2.) Indigestion and similar symptoms
      (3.) Other digestive system conditions

e. Fractures, dislocations, sprains and strains

(1.) Fractures and dislocations
(2.) Sprains and strains

f. Open wounds and lacerations

g. Contusions and superficial injuries

h. Other current injuries

i. All other acute conditions

(1.) Diseases of the ear
(2.) Headaches
(3.) Genitourinary disorders
(4.) Diseases of the skin
(5.) Diseases of the musculoskeletal system
(6.) All other acute conditions

3. Supplemental Source Data

Data compiled from various other sources on conditions not included in the NHS is reported in Part II, Section B, including:

a. Mental Illness

b. Neurologic Disorders

c. Obesity

Structure of Report

The report is presented in two parts:

1. Part I presents the major objectives, methods of approach, source and limitations of data, summary and conclusions based on factual data presented in Part II, and recommendations for additional studies.

2. Part II provides available information on the prevalence and/or incidence of selected illnesses and incapacitating conditions within the population (institutionalized and non-institutionalized) according to:

a. Geographical location and seasonal variations

b. General distribution of illness by type, degree of disability, age and sex

c. Selected characteristics of older persons (45 and over).

The figures are compiled from primary source material - National Health Survey statistics and supplemental data from other sources. Because the reporting of data and other variables described in the text lacks uniformity Part II is presented in three subsections:

Section A. Health Statistics - compiled from National Health Survey reports

Section B. Supplemental Data - health statistics compiled from various other sources on selected illnesses not included in the NHS reports

Section C. Population Statistics - population estimates used as a basis for health statistics in this report, and Population Projections 1900 - 1980.

SUMMARY OF FINDINGS

Extent of Illness and Disability

The extent of illness and degree of disability shown in this report reflects the magnitude of the problems to be reckoned with in a shelter situation. The National Health Survey, conducted during a two-year period ending June 1961, showed an average prevalence of approximately 74 million persons, or 42 percent of the civilian non-institutionalized population, affected in some degree by chronic illness.

1. Extent of Disability

   Of these 74 million, approximately 19 million, or 11 percent of the population, had one or more conditions that prevented or limited their usual activities.

   In 14.2 million persons this limitation was so severe that they were unable to work, keep house, or go to school. Each person with a chronic activity limitation had an average of 1.4 conditions.

2. Types of Disabling Conditions

   The major disabling medical conditions reported by the NHS include heart condition, high blood pressure, diabetes, arthritis and rheumatism, peptic ulcer, hernia, asthma-hay fever, chronic bronchitis and chronic sinusitis. Of this group, the conditions affected by thermal environment as reported by Dr. Lee include heart conditions, high blood pressure, diabetes, asthma-hay fever, and chronic bronchitis.

   Impairment conditions reported include visual, hearing and paralysis of major extremities and/or trunk. All of these conditions will of course, limit the ability of afflicted persons to reach shelter unaided.

3. Supplemental Data

   Approximately 27 million additional people, not included in the NHS total, are represented in additional information on such chronic conditions as mental and emotional disorders; neurological disorders, including epilepsy; cerebral palsy; multiple sclerosis; Parkinsonism; and muscular dystrophy.

4. Institutionalized Persons

The National Health Survey did not include persons in hospitals and institutions. It is estimated that approximately 600,000 are in mental hospitals and institutions. This figure includes those with mental diseases, mental defectives and epileptics. Nursing homes and related facilities account for an additional 600,000. Considering all persons, non-institutionalized and institutionalized, it is estimated that there are over 100,000,000 persons afflicted in some degree by chronic illness.

5. Impact on Age

Age renders a person more susceptible to heat, according to Drs. Lee and Henschel's "Evaluation of Thermal Environment in Shelters." Hence, the already recognized problems of older persons (45 and over) who are suffering from chronic illness will be even greater in shelter situations. Although chronic illness affects persons of all ages, a disproportionate number of elderly persons are affected to some extent.

a. The impact of chronic illness becomes more severe with increasing age. For example, 45% of persons 65 years of age and over had some activity limitation, in contrast to 7.4% of those aged 17 to 44.

b. The magnitude of the problem will increase with the projected population trends. Persons age 65 and over totaled 17.3 million in 1962 and the number is growing at the rate of 1,000 a day. The aged represent 9.3% of the National population, more than a five-fold increase since 1900 (See Part II, Section C). In about two-fifths of the States, at least 10% of the population was aged 65 and over on April 1, 1960 and in only 8 States were there fewer than 7%.

Estimated Shelter Population Mix

Assuming that chronic illness is equally distributed throughout the United States as shown in Table No. S1, it is estimated that in a shelter population of 100, approximately 56 persons will be afflicted by chronic illness. An estimated 36 persons, more than one-third of the shelter occupants, will have illness known to be adversely affected by heat (Table S2). In addition, 10 persons will be in the 65-plus age group, which is especially susceptible to the effects of heat and stress.

The exact number of obese persons within the population is not known. However, according to information reported by the Metropolitan Life Insurance Company (Ref. 20) described in Part II, Section B, a significant number of obese persons will be included in the total shelter population, increasing shelter health problems.

Table S1 Estimated Number of Persons with Chronic Illness to be Anticipated in a 100 Capacity Shelter

Type of Condition	Total Number of Persons
ALL CONDITIONS	100
No Chronic Illness	44
With Chronic Illness	56
Mental Illness	10
Neurological Diseases	5
Heart Conditions	3
High Blood Pressure	4
Diabetes	1
Peptic Ulcers	2
Arthritis and Rheumatism	6
Hernia	2
Asthma - Hay Fever	5
Chronic Bronchitis	2
Chronic Sinusitis	6
Visual Impairments	2
Hearing Impairments	3
Paralysis of Major Extremities	-
Obesity	-
65 Years Plus*	10

*Without regard to chronic illness.

Source: Figures derived from Table 7 and Supplemental Data from Sections B and C of this report.

Table S2. Estimated Number of Persons with Conditions Known to be Adversely Affected by Heat to be Anticipated in a 100 Capacity Shelter

Type of Condition	Total Number of Persons
ALL CONDITIONS	100
No Chronic Illness	44
With Chronic Illness not known to be adverse to heat	20*
With Chronic Illness known to be adverse to heat	36*
Mental Illness	10
Neurological Diseases	5
Heart Conditions	3
High Blood Pressure	4
Diabetes	1
Asthma - Hay Fever	5
Chronic Bronchitis	2
Chronic Sinusitis	6
Obesity	-
65 Years Plus**	10

*Many of these individuals will be afflicted with more than one condition
**Without regard to chronic illness.

Source. Figures derived from Table 7 and Supplemental Data from Sections B and C of this report.

Evaluation of Data

The National Health Survey is the only source data currently available that can be used to give an over-all impression of the nature and extent of health conditions in the entire United States. Data is limited, however, by the short existence of the National Health Survey. For example, information on all conditions pertinent to this study is not included. Information on resident institutions is not included in the NHS estimates. Although exclusion of the institutional population has little over-all effect on many of the statistics, it must be taken into account in the interpretation of data on types and severity of conditions for which institutional care is common, or data on the number of persons who have chronic limitations of activity or mobility.

Source material on the prevalence of illness by condition groups, except for mental illness and tuberculosis, for the institutionalized is lacking. The National Health Survey is undertaking a national survey of hospital records to provide this information, but the reports are not yet available.

1. Additional Data Desired

   It would be desirable to have specific morbidity figures, like those available on mortality (Appendix II), plus specific information on such conditions as non-institutionalized mental illness, renal disease, neurological disorders, mental retardation, drug addiction and chronic alcoholism. Limited information is available in some of these conditions. However, it has been collected and reported in a different manner from the National Health Survey data, making it difficult to present with the NHS material.

2. Limitation of Data

   While this report does provide adequate information to reflect the magnitude of the problem of illness in the population as a whole, the need for data on additional disease classification is recognized. Information on nine broad chronic condition groups and three impairment groups was sufficient to provide significant impressions of distribution by age, sex, geographical location and seasonal variations.

There is also a lack of factual information on less acute conditions which are of genuine concern to the problem of shelter health, such as the common cold, other respiratory diseases and acute gastrointestinal diseases. Comparison of figures from five surveys (1958-1962), shows that it is impossible to predict the occurrence of these conditions. (Figure 1, page 25) For example, the large number of acute conditions reported in 1961 as compared with 1960 (Table 6) reflect the magnitude of the influenza epidemic of that year.

3. Merit of Data

The report, though limited, is believed sufficient to be used as a continuing guideline to present the logistic problems and unpredictable or inapparent conditions which can be of great concern in the event of enforced shelter living.

RECOMMENDATIONS

To reflect the variances in population trends, it is recommended that:

1. A system of "up-dating" acute and chronic disease control data be initiated to keep abreast of changing times.

2. The "up-dating" system be established in close association with the National Health Survey, so that its method of recording and presenting data will coincide with civil defense needs.

To remedy the lack of data on certain conditions, it is recommended that:

1. Specific data needs be determinded and that the National Health Survey be asked to include these catagories in future research as needs arise.

2. The final product be a continuous evaluation of the health study problem in keeping with Health Mobilization program developments.

SECTION A. HEALTH STATISTICS

Introduction

National Health Survey

The reports selected for this study cover survey periods from 1957-1962.

Selection of material was based on the most up-to-date data and scope of coverage. In order to provide information for chronic illness by types of condition on a regional basis, surveys for the period 1957-June 1959 were used.

Data on Extent of Disability by condition groups was compiled from NHS report coverage 1959-1961. The prevalence of chronic illness is relatively consistent from year to year, therefore, the time difference in surveys was not considered significant.

Acute conditions, on the other hand, do vary considerably, not only by year, but by season. The most recent report, June 1961-July 1962, provides not only the most up-to-date figures but also allows a comparison of figures for five years, thus reflecting the inconsistency of these data.

Criteria considered in Classification of Health Status of Individuals are:

1. Persons with no recognizable illness or disability
    a. With normal physiologic condition indicating special care, i.e., pregnancy, infancy
    b. Not requiring any special care
2. Persons with recognizable illness or disability
    a. Classified by a specific diagnosis, site, or organ system
        (1) Acute or of short duration
        (2) Chronic or of long duration

3. Classified according to extent of disability

   a. Non-disabling
   b. Disabling

4. Classified by type of care

   a. Ambulatory or bed
   b. Home or hospital
   c. Physician or no physician

Data is further classified in terms of geographical location and seasonal variations with a general distribution by age and sex where figures are available.

Many acute conditions display seasonal variations. The most important are the respiratory diseases, especially influenza and influenza-like conditions. The close proximity of shelter inhabitants would tend to accelerate the spread of such illness. Another group of diseases which could spread under shelter conditions are the intestinal borne diseases, including disentery and common diarrheas. The spread of these diseases could be limited by practicing the best environmental sanitation possible under shelter conditions. Treatment of diarrhea with the limited medications present in the shelters would also tend to limit the spread.

The incidence of influenza, especially during years of high prevalence could be lowered if all persons availed themselves of immunization against this disease. Anti-infective medication stocked in shelters would tend to prevent the development of secondary bacterial complications in persons suffering from influenza and other viral respiratory diseases. However, no specific treatments are available for these virus diseases either in or out of shelters.

Tables

In presenting the following statistics rates are quoted per 100 population and per 1000 population. Acute conditions are quoted in rates per 100 population to indicate the incidence of disease. Chronic conditions are quoted in rates per 1000 population to indicate the prevalence of the condition at a given time.

EXTENT OF ILLNESS*

1. National Estimates**

Recent reports of the National Health Survey show an estimated 74 million persons, or 42 percent of the civilian non-institutional population, as having one or more chronic conditions during the two-year period ending June 1961. Of this number, 19 million persons, or approximately one fourth, were reported as having one or more chronic conditions that prevent or limit their activity.

402 million cases of acute conditions, an annual incidence rate of 222 cases per 100 persons (more than 2 cases per person) were experienced during a 12-month period ending June 1962. These conditions involved either medical attention or caused restricted activity for at least one day.

These conditions are recorded in Table 1.

2. Impact of Chronic Illness on Age

As can be seen in Table 2, the percentage of persons with chronic illness increases with age. For example, the percentage increases from 18 in the under-17 age group to approximately 79 percent in the over-65 group, an increase of 61 percent.

3. Acute Conditions

As shown in Table I, an estimated 402 million cases of acute illnesses or injuries were experienced in the 12-month period, July 1961 through June 1962. These conditions involved either medical attention or caused restricted activity for at least one day. The number of cases and annual case rate per 100 persons by age group is shown in Table 3.

4. Impact on Age

The incidence of acute illness decreases with age, as opposed to chronic illness which increases. For example, Table 3 shows case rate per 100 persons decreased from almost four cases per person in the under-5 age group to approximately 1 case per person in the 65-and-over group.

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* Data compiled from the National Health Survey
** Institutionalized persons excluded

Table 1. Estimated Health Status of the United States Civilian Population:* Number and percent of persons according to Health Condition Group July 1959 - June 1961

Health Condition	Number (in thousands)	Percent
Total U. S. Population[1/]	176,302	100.0
Persons with no Chronic Illness	102,453	58.1
Persons requiring special care		
Infants		2 3
Pregnant Women		(2.7)
Persons with Chronic Illness[2/]	73,849	41.9
(Limited Activity)	(19,273)	
None		(31.0)
Partial		(8.7)
Complete		(2.3)
Acute Illness (cases)[3/]	401,851	222.3[4/]

*Institutionalized persons excluded.

1/ Figures based on the sample of households in the U.S. National Health Survey, utilized by NHS to provide denominators for rate computation of health characteristics within the population (Section C).

2/ Refers to Prevalence (number of persons with illness at a given time).

3/ Refers to Incidence (number of occurrences of illness over a prescribed period).

4/ Refers to Annual Case Rate per 100 persons.

Table 2. Number and Percent of Persons with Chronic Illness: United States July 1959 - June 1961

Age	Number of Persons (in 1000's)			Percent of Population		
	Both Sexes	Male	Female	Both Sexes	Male	Female
All Ages	73,849	34,751	39,098	41.9	40.5	43.2
Under 17	11,116	6,111	5,005	18.0	19.4	16.5
17 - 44	28,596	12,890	15,706	45.3	43.0	47.4
45 - 64	22,068	10,357	11,710	61.3	59.7	62.9
65 and over	12,070	5,394	6,676	78.7	78.2	79.1

Source: National Health Survey Series B-36, October 1962,

Table 3. Number of Cases and Annual Rate per 100 Persons of Acute Illness: United States July 1961 - June 1962

Age	Number of Cases (in 1000's)			Annual Case Rate per 100 persons		
	Both Sexes	Male	Female	Both Sexes	Male	Female
All Ages	401,851	182,234	219,617	222.3	207.8	235.9
Under 5	74,720	39,705	35,016	366.7	382.8	350.1
5 - 14	111,167	54,860	56,307	293.7	285.5	302.3
15 - 24	51,834	21,298	30,536	211.7	183.1	237.6
25 - 44	87,980	34,454	53,526	194.1	159.3	226.0
45 - 64	55,639	23,428	32,211	151.5	132.5	169.2
65 and over	20,510	8,489	12,021	127.9	118.7	135.3

Source: National Center for Health Statistics, Series 10, Number 1, page 25, May 1963.

Geographical Distribution

1. Chronic Illness

Throughout the United States during the period July 1957 - June 1959 about 40.9 percent of the population were reported to have one or more chronic conditions. Table 4 shows the highest proportion, 44.2 percent, was reported in the West region, while the lowest, 39.5 percent, was reported in the South.

2. Acute Illness

Table 5 shows that persons residing in the West had a higher incidence of acute conditions, 259.5 cases per 100 persons, than did residents of the other regions. There was little difference between the incidence rates in the Northeast, North Central and the South.

Seasonal Variations

The incidence of acute conditions for the year 1961-1962 was substantially higher than the estimate of 359 million cases reported for the year July 1960-June 1961. (Figure 1.) An epidemic of influenza, occurring primarily in January-March 1962, was the major factor in the rise from 202 cases per 100 persons in the year ending June 1961 to 222 cases for the year ending June 1962. The latter was the second highest rate for acute conditions during the years of data collection by the National Health Survey. The rate of 260 per 100 persons during July 1957-June 1958 was higher owing to the Asian influenza epidemic that year (Table 6).

Table 7 shows the incidence statistics for all acute conditions by age for the four quarters ending with June 1962. The rate reached its highest point in the January-March quarter when there were approximately 80 new cases per 100 persons. In each of the four calendar quarters, children under 5 years of age had the highest incidence rate per quarter, the rates for boys exceeding those for girls. The incidence rate of acute conditions declined with increasing age. However, the sex difference in incidence in the age groups among persons five years and over was reversed -- the rates were higher for females than for males.

Table 4. Percent of Persons with Chronic Illness by Region and Age: United States July 1957 - June 1959

Region	All Ages	0-24	25-44	45-64	65 Plus
Northeast	40.5	21.3	43.9	55.7	74.9
North Central	41.2	20.5	49.0	60.6	76.4
South	39.5	19.4	46.5	61.9	80.7
West	44.2	24.8	52.8	62.5	77.3

Source: National Health Survey, Series C-5, page 12.

Table 5. Annual Case Rate Per 100 Persons of Acute Illness by Region and Age: United States July 1961 - June 1962

Region	All Ages	Under 5	5-14	15-24	25-44	45-64	65 and over
Northeast	215.6	379.6	311.6	213.1	188.6	134.6	112.8
North Central	214.5	348.0	276.5	217.4	186.7	144.1	130.0
South	216.5	359.2	270.5	179.2	191.7	158.7	140.4
West	259.5	397.7	347.2	269.6	221.1	183.8	130.0

Source: Adapted from National Health Center for Health Statistics, Series 10, No. 1, page 31, May 1963.

Figure 1. Incidence of all acute conditions and acute respiratory conditions per 100 persons per quarter.

Table 6 Incidence of Acute Illness, Rate per 100 Persons: United States, 1958 - 1963

Condition Group	1958-59	1959-60	1960-61	1961-62	1962-63
All acute conditions	214.8	203.4	201.9	222.3	218.8
Ineffective and Parasitic diseases	25.8	24.5	27.6	27.2	24.4
Respiratory conditions	125.7	119.1	110.3	127.7	127.2
Digestive system conditions	11.9	10.6	11.9	12.4	11.2
All other acute conditions	22.5	23.1	25.3	19.9	28.4

Source National Health Center for Health Statistics.

Table 7. Quarterly Rate per 100 Persons of Acute Illness by Quarter: United States July 1961 - June 1962

Sex and Date	Age						
	All Ages	Under 5	5-14	15-24	25-44	45-64	65+
Both Sexes:							
July - Sept. 1961	37.4	64.9	41.3	34.0	37.3	24.4	21.0
Oct - Dec. 1961	57.9	92.4	77.6	56.7	49.6	40.5	32.2
Jan. - March 1962	79.9	116.2	114.4	79.0	67.8	54.3	46.8
Apr. - June 1962	47.1	93.2	60.5	41.6	39.6	29.2	28.0
Male:							
July - Sept. 1961	34.8	74.0	37.8	30.6	29.6	25.2	*
Oct. - Dec. 1961	54.7	95.5	71.0	47.1	40.9	36.9	*
Jan. - March 1962	75.2	117.3	113.5	72.7	56.8	46.9	40.4
Apr. - June 1962	43.0	96.0	56.6	32.4	32.2	23.5	*
Female:							
July - Sept. 1961	39.8	55.5	44.9	37.1	44.4	29.4	*
Oct. - Dec. 1961	60.8	89.2	78.3	65.4	57.5	43.8	30.8
Jan. - March 1962	84.3	115.0	115.3	84.7	77.8	61.2	51.9
Apr. - June 1962	50.9	90.3	64.4	49.9	46.3	34.6	27.6

Source. Adapted from National Center for Health Statistics, Series 10, Number 1, page 7, May 1963

TYPES OF ILLNESS

The NHS reports do not include a separate classification by specific disease or condition for all chronic illness within the total 74 million persons, shown in Table 1. However, Table 8 records the number and rate per 1,000 population for nine selected medical conditions and three impairment conditions reported for the period July 1957 - June 1959. A distribution of these data by age and sex is shown in Table 10.

1. Leading Causes of Acute Illness

In each calendar quarter, respiratory illness was the leading contributor to the total acute morbidity. Of the categories shown, the second largest was injuries during July-December 1961 and infective and parasitic diseases during the remainder of the year, January-June 1962

Table 9 shows the number and case rate per 100 persons per year by type of condition, July 1961-June 1962. Distribution of these data by age and sex are shown in Table 11.

Table 8. Prevalence of Selected Chronic Conditions: Number and Rate per 1,000 Population July 1957 - June 1959

Condition Type	Number (in thousands)	Rate per 1,000 Population
Medical		
Heart Condition	5,013	29.5
High Blood Pressure	5,234	30.8
Diabetes	1,530	9.0
Peptic Ulcer	2,440	14.4
Arthritis and Rheumatism	10,845	63.9
Hernia	2,539	14.9
Asthma - Hay Fever	9,225	54.3
Chronic Bronchitis	1,980	11.7
Chronic Sinusitis	9,941	58.5
Impairments		
Visual Impairments	3,048	17.9
Hearing Impairments	5,798	34.1
Paralysis of Major Extremities and/or Trunk	936	5.5

Source: Adapted from: U.S. Department of Health, Education, and Welfare, Public Health Service, National Health Survey, "Geographic Regions and Urban-Rural Residence," Health Statistics, Series C: Number 5 (1961).

Table 9. Incidence of acute conditions: Number and rate per 100 persons per year July 1961 - June 1962

Condition Group	Number in Thousands	Rate per 100 persons per Year
All acute conditions	401,851	222.3
Ineffective and parasitic diseases	49,123	27.2
Common childhood diseases	16,110	8.9
The "virus"	24,979	13.8
Other infective and parasitic diseases	8,035	4.4
Respiratory conditions	230,805	127.7
Upper respiratory conditions	140,844	77.9
Common cold	111,653	61.8
Other acute upper respiratory	29,191	16.1
Influenza	81,317	45.0
Influenza with digestive manifestations	7,281	4.0
Other influenza	74,035	41.0
Other respiratory conditions	8,645	4.8
Pneumonia	2,323	1.3
Bronchitis	3,993	2.2
Other acute respiratory conditions	2,328	1.3
Digestive system conditions	22,394	12.4
Dental conditions	8,706	4.8
Functional and Symptomatic upper gastrointestinal disorders	6,099	3.4
Other digestive system conditions	7,589	4.2
Injuries	52,181	28.9
Fractures, dislocations, sprains and strains	12,925	7.1
Fractures and dislocations	4,676	2.6
Sprains and strains	8,249	4.6
Open wounds and lacerations	14,723	8.1
Contusions and superficial injuries	11,294	6.2
Other current injuries	13,240	7.3
All other acute conditions	47,348	26.2
Diseases of the ear	8,684	4.8
Headaches	3,752	2.1
Genitourinary disorders	6,763	3.7
Deliveries and disorders of pregnancy and the puerperium	5,031	2.8
Diseases of the skin	5,743	3.2
Diseases of the musculoskeletal system	4,774	2.6
All other acute conditions	12,600	7.0

Source: Adapted from: U.S. Public Health Service, National Center for Health Statistics. Acute conditions, Incidence and Associated Disability. Series 10, Number 1, May 1963.

Table 10. Prevalence of Selected Chronic Conditions by Age and Sex
July 1957 - June 1959

Selected Conditions	Total	Age			Sex	
		0 to 44 Years	45 to 64 Years	65 and Over	Male	Female
	Number in Thousands					
Heart conditions	5,013	967	1,863	2,183	2,529	2,484
High blood pressure	5,234	1,023	2,317	1,894	1,498	3,736
Diabetes	1,530	266	671	593	660	871
Peptic ulcer	2,440	1,155	959	327	1,771	669
Arthritis and rheumatism	10,845	1,924	5,022	3,898	3,806	7,038
Hernia	2,539	881	857	801	1,916	623
Asthma - Hay Fever	9,225	6,345	2,094	786	4,556	4,669
Chronic bronchitis	1,980	1,200	503	277	957	1,023
Visual impairments	3,048	695	839	1,514	1,476	1,571
Deafness and other hearing impairments	5,798	1,528	1,750	2,520	3,277	2,521
Paralysis of major extremities and/or trunk	936	323	285	328	510	426
	Rate per 1,000 Persons					
Heart conditions	29 5	8.0	53.6	148.8	30.6	28.5
High blood pressure	30.8	8.5	66.7	129.1	18 1	42.8
Diabetes	9.0	2.2	19 3	40.4	8 0	10.0
Peptic ulcer	14.4	9.6	27.6	22.3	21.4	7.7
Arthritis and rheumatism	63.9	16.0	144.5	265.5	46.1	80.7
Hernia	14.9	7.3	24.7	54.6	23.2	7.1
Asthma - Hay Fever	54.3	52.7	60.2	53.6		
Chronic bronchitis	11.7	10.0	14.5	18.9	11 6	11.7
Visual impairments	17.9	5.8	24.1	103.2	17.9	18.0
Deafness and other hearing impairments	34 1	12.7	50.3	171.8	39.7	28.9
Paralysis of major extremities and/or trunk	5.5	2.7	8.2	22.4	6.2	4.9

Source: Adapted from Dept. of Health, Education, and Welfare, Public Health Service, Health Statistics, from the National Health Survey in Statistical Abstracts of the U.S., 1962, U.S. Dept of Commerce, Bureau of the Census.

Table 11 Incidence of Acute Conditions by Age and Sex
July 1961 - June 1962

Condition Group	Age					Sex	
	All Ages	Under 6	6-16	17-44	45+	Male	Female
	Number of Cases in Thousands						
All Conditions	401,851	89,155	110,192	126,355	76,149	182,235	219,616
Infective and Parasitic Diseases	49,123	17,569	16,649	10,150	4,755	21,794	27,329
Upper Respiratory Conditions	140,844	35,381	40,162	37,759	27,542	65,099	75,745
Influenza	81,317	10,892	25,047	29,102	16,275	34,934	46,382
Other Respiratory Conditions	8,645	2,840	1,657	2,294	1,854	4,022	4,623
Digestive System Conditions	22,394	4,880	4,637	8,302	4,575	9,321	13,073
Injuries	52,181	8,633	13,539	18,149	11,860	29,625	22,557
All Other Acute Conditions	47,348	8,960	8,500	20,599	9,288	17,440	29,908
	Annual Case Rate Per 100 Persons						
All Conditions	222.3	363.8	277.7	197.9	144.3	207.8	235.9
Infective and Parasitic Diseases	27.2	71.7	42.0	15.9	9.0	24.9	29.4
Upper Respiratory Conditions	77.9	144.4	101.2	59.1	52.2	74.2	81.4
Influenza	45.0	44.4	63.1	45.6	30.8	39.8	49.8
Other Respiratory Conditions	4.8	11.6	4.2	3.6	3.5	4.6	5.0
Digestive System Conditions	12.4	19.9	11.7	13.0	8.7	10.6	14.0
Injuries	28.9	35.2	34.1	28.4	22.5	33.8	24.2
All Other Acute Conditions	26.2	36.6	21.4	32.3	17.6	19.9	32.1

Source: Adapted from. DHEW, Public Health Service, National Center for Health Statistics. Acute Conditions, Incidence and Associated Disability, Series 10, Number 1, May 1963

Geographical Distribution

The distribution of selected chronic conditions in the four geographic regions is shown in Tables 12 and 13.

There was no appreciable difference in the prevalence of heart conditions by geographic region. However, the rate for all regions was somewhat higher in rural-farm areas than in urban and nonfarm areas. This differential by place of residence was quite apparent in the South. The prevalence of high blood pressure was also higher in Southern rural-farm areas than in comparable areas of the other regions. These diseases which are prevalent among older persons and cause extensive disability may account to some extent for the increased rate of disability among older persons in the South (Table 20). The rate for high blood pressure was consistently higher for females than for males in all of the regions.

The rate for diabetes was 11.3 cases per 1,000 population in the Northeast, 9.2 cases in the North Central, 8.3 in the South, and 6.2 cases in the West. This pattern of geographic distribution, exhibiting a gradual decrease in prevalence from east to west, was also characteristic of the rates by sex, and by urban and rural-nonfarm area of residence. This distribution was of particular interest because a similar geographic trend has been noted in age-adjusted mortality rates for diabetes.

The rates for peptic ulcer and for hernia did not vary among regions. The higher prevalence of these conditions among males and in rural-farm areas was consistent in each of the regions.

The prevalence of arthritis and rheumatism was in excess of 80 cases per 1,000 population in rural-farm areas of each of the regions as compared with rates ranging from 50-60 per 1,000 persons in rural-nonfarm areas, and from 60-70 per 1,000 persons in urban areas.

Among chronic conditions affecting the respiratory system, the rate for sinusitis was highest in the North Central region, with cases among persons in rural-nonfarm areas accounting for the high rate. Asthma-hay fever and chronic bronchitis were more prevalent in the West than in other regions, with rates for all places of residence contributing to the high rate. The incidence of acute respiratory conditions was also found to be higher in the West than in the other geographic regions (see Table 14).

Differences in the rate of impairments in the several regions were not remarkable, although the rate of hearing impairments among males and among urban and rural-farm residents was slightly higher in the West than in any of the other regions.

Table 12. Prevalence of Selected Chronic Conditions by Region: United States, July 1957 - June 1959

Selected Conditions	Region				
	All Regions	North-east	North Central	South	West
	Number of Chronic Conditions in Thousands				
Heart conditions	5,013	1,291	1,495	1,508	720
High blood pressure	5,234	1,313	1,475	1,767	680
Diabetes	1,530	478	474	427	152
Peptic ulcer	2,440	570	738	756	376
Arthritis and rheumatism	10,845	2,494	3,346	3,431	1,574
Hernia	2,539	640	811	727	361
Ashtma-hay fever	9,225	2,079	2,534	2,754	1,858
Chronic bronchitis	1,980	470	599	577	333
Chronic sinusitis	9,941	1,931	3,615	2,899	1,495
Visual impairments	3,048	753	810	1,060	425
Hearing impairments	5,798	1,570	1,747	1,495	986
Paralysis or major extremities and/or trunk	936	188	302	323	123
	Rate per 1,000 Population				
Heart conditions	29.5	30.5	29.0	29.2	29.6
High blood pressure	30.8	31.0	28.6	34.2	28.0
Diabetes	9.0	11.3	9.2	8.3	6.2
Peptic ulcer	14.4	13.5	14.3	14.6	15.5
Arthritis and rheumatism	63.9	58.8	65.0	66.5	64.7
Hernia	14.9	15.1	15.7	14.1	14.8
Asthma-hay fever	54.3	49.1	49.2	53.3	76.4
Chronic bronchitis	11.7	11.1	11.6	11.2	13.7
Chronic sinusitis	58.5	45.6	70.2	56.2	61.5
Visual impairments	17.9	17.8	15.7	20.5	17.5
Hearing impairments	34.1	37.0	33.9	29.0	40.5
Paralysis of major extremities and/or trunk	5.5	4.4	5.9	6.3	5.1

Source: Health Statistics from National Health Survey, Series C-5,1961.

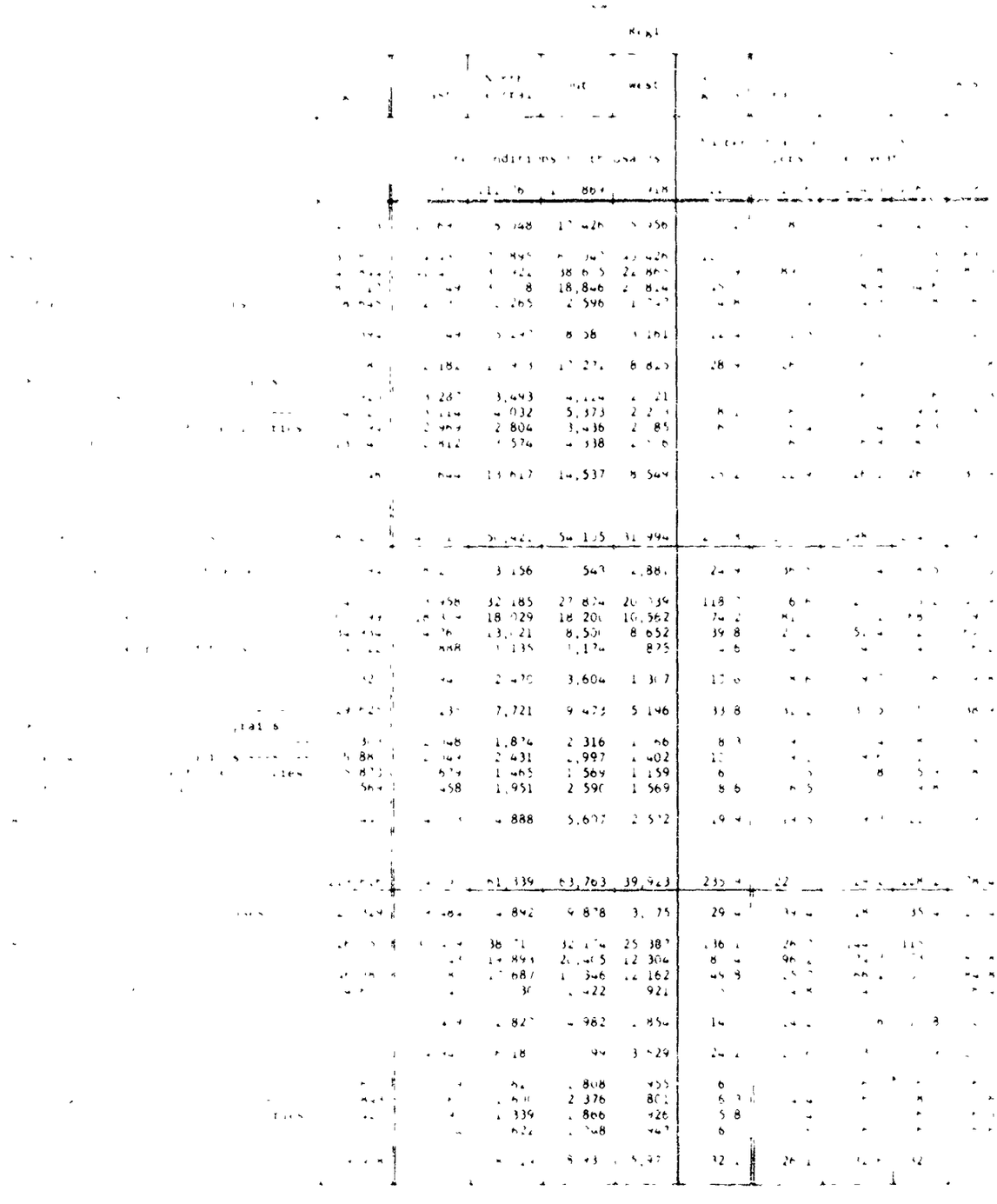
Table 13. Prevalence of selected chronic conditions by geographic division: United States
July 1957 - June 1959

Selected chronic conditions	All divisions	New England States	Middle Atlantic States	East North Central States	West North Central States	South Atlantic States	East South Central States	West South Central States	Mountain States	Pacific States
	Number of chronic conditions in thousands					Number of chronic conditions in thousands				
Heart conditions	5,013	321	969	1,013	482	708	332	468	149	571
High blood pressure	5,234	295	1,017	1,016	459	848	420	498	161	519
Diabetes	1,530	104	373	314	160	222	104	101	(*)	113
Peptic ulcer	2,440	162	409	499	238	337	178	241	92	284
Arthritis and rheumatism	10,845	539	1,955	2,286	1,060	1,645	775	1,010	386	1,188
Hernia	7,539	165	475	552	259	353	156	219	92	769
Asthma-hay fever	9,225	491	1,587	1,747	787	1,247	484	1,022	541	1,317
Chronic bronchitis	1,980	107	363	418	181	269	129	179	82	251
Chronic sinusitis	9,941	392	1,540	2,542	1,074	1,259	568	1,072	412	1,684
Visual impairments	3,048	168	585	557	254	525	206	329	111	314
Hearing impairments	5,798	389	1,181	1,140	608	753	271	471	227	758
Paralysis of major extremities and/or trunk	936	(*)	137	189	113	156	(*)	110	(*)	91
	Rate per 1,000 population					Rate per 1,000 population				
Heart conditions	29.5	32.4	29.9	28.2	30.9	30.0	28.9	28.2	23.8	31.6
High blood pressure	30.8	29.7	31.3	28.3	29.5	36.0	36.6	30.0	25.8	28.7
Diabetes	9.0	10.5	11.5	8.7	10.3	9.4	9.1	6.1	(*)	6.3
Peptic ulcer	14.4	16.3	12.6	13.9	15.3	14.3	15.5	14.5	14.7	15.7
Arthritis and rheumatism	63.9	54.3	60.2	63.6	68.0	69.8	67.5	60.9	61.8	65.7
Hernia	14.9	16.6	14.6	15.4	16.6	15.0	13.6	13.2	14.7	14.9
Asthma-hay fever	54.3	49.5	48.9	48.6	50.5	52.9	42.2	61.7	86.5	72.9
Chronic bronchitis	11.7	10.8	11.2	11.6	11.6	11.4	11.2	10.8	13.2	13.9
Chronic sinusitis	58.5	39.5	47.4	70.7	68.9	53.4	49.5	64.7	65.9	60.0
Visual impairments	17.9	16.9	18.0	15.5	16.3	22.3	17.9	19.8	17.8	17.4
Hearing impairments	34.1	39.2	36.4	31.7	39.0	32.0	23.6	28.4	36.3	41.9
Paralysis of major extremities and/or trunk	5.5	(*)	4.2	5.3	7.3	6.6	(*)	6.6	(*)	5.0

Source: Health Statistics from the National Health Survey, Series C-6, March 1961.

Source: Health Statistics from the National Health Survey, Series C-6, March 1961.

Table 14 Incidence of acute conditions and number of acute conditions per 100 persons per year, by region, sex, and condition group: United States, July 1961 - June 1962



Source: Health Statistics from the National Health Survey, Series 10, No. 1, May 1963.

EXTENT OF DISABILITY

Chronic Illness Causing Limitation of Activity

Statistics derived from the National Health Survey conducted July 1959 - June 1961 show that there are approximately 19 million persons in the United States noninstitutional population whose activities are limited to some extent by chronic disease or impairment. Activity limitation refers not only to the major activity of the person (ability to work, keep house or go to school) but also to other activities, as shown in Table 15. About 3 million of these persons, or 17 percent, reported heart conditions, either alone or in conjunction with other chronic conditions, as a cause of their limitation. About 16 percent reported that arthritis or rheumatism contributed to their limitation. Among the 4 million persons who were unable to work, keep house, or go to school (Table 16) 24 percent named heart conditions as the cause of their inability to carry on the major activity of their age group, 16 percent reported arthritis or rheumatism, and 11 percent reported visual impairment. (Table 17.)

Of those with limited activity, 5 million were also restricted to some degree in their ability to move about freely, a result of chronic conditions. A person's mobility limitation may range from being confined to the house all the time, except in emergencies, to being able to go outside alone but having trouble getting around alone (Lower part of Table 16). About 20 percent attributed this limitation to heart conditions, and 24 percent reported arthritis or rheumatism as a contributing cause. Among the 915,000 persons confined to the house, 23 percent were confined because of heart conditions, 18 percent attributed their confinement to paralysis, 17 percent to arthritis or rheumatism, and 13 percent to visual impairment. (Table 18).

Impact on Age

Age in itself renders a person more susceptible to heat, as evidenced by Dr. Lee's "Evaluation of Thermal Environment in Shelters" (Ref. 16) Hence, the already recognized problems of older persons (45 and over) who are suffering from chronic illness will be even greater in shelter situations.

Although chronic illness affects persons of all ages, a disproportionate number of elderly persons are affected to some extent. With increasing age, the impact of chronic illness becomes more severe. For example, as shown in Table 19, of the 15 million non-institutionalized population age 65 and over, 12 million, or approximately four-fifths, reported one or more chronic conditions, while in the 62 million under 17 years of age only 11 million, less than one-sixth, reported disability.

Geographical Distribution

Throughout the United States during the period July 1957 - June 1959, about 40.9 percent of persons were reported to have one or more chronic conditions.

The highest proportion of persons with one or more chronic conditions, 44.2 percent, was reported in the West region, while the lowest percentage, 39.3 percent, was reported in the South. However, the percentage of persons whose activity was limited by chronic conditions was higher in the South than in any of the other regions. Much of this is explained by the high prevalence of chronic conditions among persons 65 years and older, where the limitation would be expected. This is substantiated by data shown in Table 20. In the South 47.7 percent of the persons 65 years and older had some degree of activity limitation. In each of the Southern residence areas the rate of limitation in this age group was high in relation to rates in the other geographic regions, but the differential was greater in farm areas than in rural-nonfarm and urban areas.

The comparatively low rate of chronic activity limitation in the Northeast region was rather striking, in view of the fact that 32.4 percent of the population in this region was in the group 45 years and over, as compared with 28.8 percent in the North Central, 27.4 percent in the South, and 27.6 percent in the West.

Table 15. Number and Percent Distribution of Persons with Chronic Illness According to Degree of Activity Limitation[1] by Age
July 1959 - June 1961

Activity Status	All Ages	Age			
		Under 17	17-44	45-64	65+
	Number of Persons in Thousands				
With one or more chronic conditions	73,849	11,116	28,596	22,068	12,070
With limitation of activity: All degrees	19,273	1,120	4,652	6,593	6,908
With partial limitation	5,056	580	1,630	1,803	1,043
With major limitation	14,217	540	3,022	4,790	5,865
	Percent Distribution				
With one or more chronic conditions	41.9	18.0	45.3	6[illegible]	78.7
With limitation of activity: All degrees	10.9	1.8	7.4	18.3	45.1
With partial limitation	2 9	.9	2.6	5.0	4.8
With major limitation	8 1	.9	4.8	13 3	38 3

[1]Activity refers to ability to work, keep house, or go to school.

Source: Adapted from National Health Survey, Series B, No. 36,(1962).

Table 16. Number of Persons with Activity or Mobility Limitation Caused by Chronic Illness and Average Number of Conditions per Person by Degree of Limitation: United States July 1959 - June 1961

Degree of Limitation	Number of Persons (in 1000's)	Number of chronic conditions reported (in 1000's)	Average number of chronic conditions per person
ACTIVITY LIMITATION:			
All Degrees	19,273	27,205	1.4
Limited but not in major activity[1]	5,056	6.050	1.2
Limited in amount or kind of major activity[1]	10,243	14,307	1.4
Unable to carry on major activity[1]	3 974	6,848	1.7
MOBILITY LIMITATION:			
All Degrees	4,766	8,649	1.8
Has trouble getting around alone	2,843	5,126	1.8
Cannot get around alone	1,008	1,798	1.8
Confined to house	915	1,725	1.9

[1]Major activity refers to ability to work, keep house, or go to school.

Source: Adapted from National Health Survey, Series B, No. 36 (1962).

Table 17. Chronic Conditions Causing Limitation of Activity: Number of Persons with Limitation and Percent Distribution

Condition Causing Limitation	Number (in Thousands)	Percent
Total Persons Limited - All Degrees of Limitation	19,273	100.0
1. Heart Conditions	3,213	16.7
2. Arhtritis and Rheumatism	3,062	15.9
3. Mental and Nervous Conditions	1,351	7.3
4. Impairment of lower extremities and hips - Paralysis excepted	1,307	6.8
5. High Blood Pressure	1,320	6.8
6. Impairment of back or spine	1,271	6.6
7. Conditions of the G.U. System	1,111	5.8
8. Visual	1,045	5.4
9. Digestive System, other conditions	999	5.2
10. Asthma - Hay Fever	1,009	5.2
11. Circulatory System, other	822	4.3
12. Other dis. of Bone, Joints and Muscles	730	3.8
13. Paralysis, complete or partial	673	3.5
14. Hernia	589	3.1
15. Peptic Ulcer	514	2.7
16. Chronic Sinus and Bronchitis	509	2.6
17. Diabetes	458	2.4
18. Varicose Veins	462	2.4
19. Other Conditions of Resp. System	382	2.0
20. Hearing	395	2.0
21. Impairments of upper extremities and shoulders - Paralysis excepted	383	2.0
22. Hemorrhoids	297	1.5
23. Benign and unspecified neoplasms	256	1.3
24. Malignant neoplasms	228	1.2
25. Tuberculosis, all forms	174	0.9

Source: Adapted from USDHEW, PHS, National Health Survey, Health Statistics, Series B, No. 36, pp. 10-11 (1962).

Table 18. Prevalence of Chronic Conditions: Selected Chronic Conditions Causing Activity Limitation
July 1959 - June 1961

Chronic Conditions reported as causing limitation	Limitation of Activity					
	All degrees of limitation	Limited in amount or kind of activity	Unable to carry on major activity	All degrees of limitation	Limited in amount or kind of activity	Unable to carry on major activity
	Number of conditions (1000's)			Percent of persons reporting condition[1]		
Persons Limited	18,440	14,521	3,919	100 0	100 0	100 0
Heart disease	3,105	2,184	920	16.8	15.0	23 5
Arthritis and rheumatism	2,991	2,372	619	16.2	16.3	15.8
Mental and nervous disorders	1,314	1,015	299	7.1	7.0	7.6
High blood pressure without heart involvement	1,260	1,022	238	6.8	7.0	6.1
Impairment of back or spine	1,162	1,052	110	6.3	7.2	2.8
Impairment of vision	1,018	613	405	5.5	4.2	10.3
Asthma and hay fever	982	807	175	5.3	5.6	4.5
Paralysis of extremities and/or trunk	630	268	362	3.4	1.8	9.9
Hernia	554	421	133	3.0	2.9	3.4
Ulcer of stomach or duodenum	483	382	100	2.6	2.6	2.6
Sinusitis or bronchitis	457	398	59	2.5	2.7	1.5
Diabetes mellitus	425	306	119	2.3	2.1	3.0
Impairment of hearing	374	249	125	2.0	7	3.2
Benign and unspecified neoplasms	271	213	57	1.5	. 5	1.5
Malignant neoplasms	226	128	99	1.2	.9	2.5
Tuberculosis, all forms	163	106	56	.9	.7	1 4
Absence of major extremities	122	89	34	.7	.6	.9

[1] Percentages may add to more than 100 because a person can report more than one condition as the cause of his limitation, or, they may add to less than 100 since only conditions frequently reported are included in these data.

Source U.S. Dept. of Health, Education, and Welfare, Office of the Secretary, Health, Education, and Welfare Trends: 1962 Edition, Washington, D.C., U.S. Gov't. Printing Office, 1962, p.15.
(U.S. National Survey data).

Welfare Trends. 1962 Edition, Washington, D.C., U.S. Gov't. Printing Office, 1962, p.15.
(U.S. National Survey data).

Table 19. Prevalence of Chronic Illness: Number and Percent According to Extent of Disability,* by Age
July 1959 - June 1961

Age	Persons with one or more chronic conditions						
	Total population	Total	No activity limitation	Having some activity limitation			
				Total	Not in major activity[1]	In amount or kind of major activity[1]	Unable to carry on major activity[1]
	Number of persons (1000's)						
All ages	176,302	73,849	54,577	19,273	5,056	10,243	3,974
Under 17	61,911	11,116	9,996	1 120	580	407	133
17 - 44	63,068	28,596	23,943	4,652	1,630	2,600	422
45 - 64	35,989	22,068	15,475	6,593	1,803	3,745	1,045
65 and over	15,334	12,070	5,162	6,908	1,043	3,491	2,374
	Percent distribution of persons						
All ages	100.0	41.9	31.0	10.9	2.9	5.8	2.3
Under 17	100.0	18.0	16.1	1.8	9	7	2
17 - 44	100.0	45.3	38 0	7.4	2.6	4.1	.7
45 - 64	100.0	61.3	43.0	18.3	5 0	10.4	2.9
65 and over	100.0	78.7	33.7	45.1	6 8	22.8	15.5

*Extent of Disability refers to Activity Limitation.

[1] Major activity refers to ability to work, keep house, or go to school.

Source: U.S. Department of Health, Education, and Welfare, Public Health Service, National Health Survey. Chronic Conditions Causing Limitation of Activities, United States, July 1959-61, Health Statistics Series B-No. 36. October 1962, p.19.

Source: U.S. Department of Health, Education, and Welfare, Public Health Service, National Health Survey. Chronic Conditions Causing Limitation of Activities, United States, July 1959-61, Health Statistics Series B-No. 36. October 1962, p.19.

Table 20. Average number and percent distribution of persons according to presence of chronic conditions and limitation of activity by region and age. United States, July 1957-June 1959

Region and age	All persons	Persons with no chronic conditions	Persons with 1+ chronic conditions		All persons	Persons with no chronic conditions	Persons with 1+ chronic conditions	
			Total	With any degree of chronic limitation of activity			Total	With any degree of chronic limitation of activity
	Average number of persons in thousands				Percent distribution			
All regions								
All ages	[illegible]	60,325	69,510	16,919	100.0	59.1	40.9	10.0
0-24	74,826	59,122	15,703	1,631	100.0	79.0	21.0	2.2
25-44	45,579	23,919	21,660	3,376	100.0	52.5	47.5	7.4
45-64	34,763	[illegible]	20,809	5,714	100.0	40.1	59.9	16.4
65+	14,667	[illegible]	11,338	6,201	100.0	22.7	77.3	42.3
Northeast								
All ages	42,379	25,211	17,168	4,030	100.0	59.5	40.5	9.5
0-24	16,887	13,282	3,605	373	100.0	78.7	21.3	2.2
25-44	11,765	6,598	5,167	752	100.0	56.1	43.9	6.4
45-64	9,799	4,345	5,454	1,401	100.0	44.3	55.7	14.3
65+	3,923	986	2,942	1,504	100.0	25.1	74.9	38.3
North Central								
All ages	51,504	30,308	21,201	5,049	100.0	58.8	41.2	9.8
0-24	22,794	18,114	4,680	472	100.0	79.5	20.5	2.1
25-44	13,859	7,067	6,792	999	100.0	51.0	49.0	7.2
45-64	[illegible],267	4,041	6,226	1,655	100.0	39.4	60.6	16.1
65+	4,588	1,084	3,504	1,922	100.0	23.6	76.4	41.9
South								
All ages	51,622	31,233	20,388	5,427	100.0	60.5	39.5	10.5
0-24	24,273	19,551	4,721	526	100.0	80.5	19.4	2.2
25-44	13,209	7,068	6,141	1,061	100.0	53.5	46.5	8.0
45-64	10,036	3,821	6,215	1,881	100.0	38.1	61.9	18.7
65+	4,105	794	3,311	1,959	100.0	19.3	80.7	47.7
West								
All ages	24,325	13,573	10,752	2,413	100.0	55.8	44.2	9.9
0-24	10,872	8,175	2,697	259	100.0	75.2	24.8	2.4
25-44	6,747	3,187	3,560	564	100.0	47.2	52.8	8.4
45-64	4,861	1,747	2,914	774	100.0	37.5	62.5	16.6
65+	2,046	465	1,581	816	100.0	22.7	77.3	39.9

Source Health Statistics from the National Health Survey, Series C-5, 1961.

SECTION B. SUPPLEMENTAL DATA

Mental Illness

The problem of mental illness is of major concern in shelter living. Mental illness or other personality disturbances are usually significant factors in criminal behavior, suicide, alcoholism and narcotic addiction. The extent of mental illness as reported in the 1963 Fact Sheet of the National Association for Mental Health shows that.

1. At least 1 person in every 10 - 19,000,000 people has some form of mental or emotional illness (from mild to severe) that needs psychiatric treatment.

2. Mental illness is known to be an important factor in many physical illnesses, even heart disease and tuberculosis.

3. At least 50% of all the millions of medical and surgical cases treated by private doctors and hospitals have a mental illness complication.

The extent of hospitalization of mental patients is reported as follows:

1. There are more people in hospitals with mental illness, at any one time, than with all other diseases combined, including cancer, heart disease, tuberculosis and every other killing and crippling disease.

2. In 1962 about 1,100,000 persons received treatment in our public, Federal and private mental hospitals and in the psychiatric wards of general hospitals. (This included patients who were in the hospital at the beginning of the year, plus those who were admitted during the year.)

3. On any one day of the year about 800,000 persons are under the psychiatric care of these hospitals, including about 125,000 who are not actually hospitalized but are on 'trial visit' or a similar form of supervision.

- Each year about 700,000 persons are admitted for psychiatric treatment in mental hospitals and psychiatric sections of general hospitals Of these, over 100,000 are admitted for the second or third time.

- In spite of the increase in the number of patients treated during the year in State and county mental hospitals, fewer patients were in the hospital at the end of the year than at the beginning. In 1962 the resident hospital population declined again, slightly, for a seventh successive year.

Neurological Disorders

According to the National Institutes of Neurological Diseases and Blindness, an estimated 10,000,000 persons are afflicted in some degree by neurological disorders. These conditions include epilepsy, 1,200,000, cerebral palsy, 550,000; multiple sclerosis and other demyelinating diseases, 500,000; Parkinsonism, 500,000; and muscular dystrophy, 200,000.

Obesity

The number of obese persons in the United States is not known. Several research studies are currently under way to determine this factor, but reports are not yet available.

The following information, however, was recently reported by the Metropolitan Life Insurance Company:

> A very considerable proportion of adult Americans are over-weight. According to the Build and Blood Pressure Study, 1959, of the Society of Actuaries, 1 in every 5 men at ages 20 and older is at least 10 percent above average weight -- taking into account height and age -- and more than 1 in every 20 weighs at least 20 percent above average. For women, the corresponding proportions are somewhat higher, being about 1 in 4 and 1 in 9, respectively."

Summary

There are an estimated 19,000,000 people with mental and emotional disorders, 10,000,000 with neurological disorders, totaling 29,000,000 persons with illness which can be added to the 74,000,000 reported by the National Health Survey.

Hospital Utilization

According to the National Hospital Association, in 1961 there were 29,375,000 people admitted to short term hospitals throughout the United States. This was an increase of 405,000 hospital admissions over the year before (Table 22). An average of one out of every eight persons was admitted to a hospital in 1951. Ten years later, an average of one out of every nine persons in the United States was hospitalized.

Some 489,000 patients, 2.7 per 1000 population, were hospitalized on an average day in 1961, almost 64,000 persons per day during the year. General medical and surgical hospitals in the United States had 659,000 available beds in 1961, an average of 3.6 beds per 1,000 population (Table 22).

The number of women discharged from short-stay hospitals per 1,000 population is greater than the number of hospital discharges for men, according to the U.S. National Health Survey study of 1958-60. There were 140.9 per 1,000 hospital discharges for females per year compared to 87.5 discharges per 1,000 for males.

The largest number of hospital discharges for females was in the age groups of 15 to 24 and 25 to 44, representing 231.4 and 210.2 discharges per 1,000 population, respectively These age groups include the childbearing years which attribute to this large number.

Excluding deliveries from this data decreases the number of discharges considerably, but increases the average length of nospital stay for the female population in the childbearing age groups. This is due to the comparatively short length of hospital stay for deliveries in relation to other hospitalized conditions.

In contrast, the largest number of discharges for men were for age 65 years and older, 165 per thousand, women represented 129.6 discharges per thousand for this age group.

For both sexes and all ages, the national average of discharges from short-stay hospitals was 114.9 per thousand population

On a regional basis, persons in the West had the largest number of discharges per 1,000 population, 121.4. The Northeast, with 106.3 per 1,000, had the lowest number

On the average, in all regions, women had the largest number of hospital discharges per 1,000 population for each age group, except for those 65 years of age and over where discharges of men in this group were higher in all regions. An explanation for these sex-age group variations may be attributed to the fact that certain conditions requiring hospitalization tend to occur more frequently in males of this age group.

The average length of stay for all regions and all ages was 8.4 days. Men exceeded this average stay by 2.9 days, while women stayed 1.2 days less. The longest average stays were recorded for persons 65 years and older, 14 9 days. Females in this age group averaged 14.0 days, while men averaged 15.9 days.

On a regional basis, the longest average stay noted for all ages was in the Northeast, 10.2 days. The South recorded the shortest average stay, 7.3 days. In all regions, except the Northeast, age 65 years and over represented the longest average hospital stay. In the Northeast, the longest average stay was recorded for ages 45 through 64.

Table 21. Hospital Utilization - All Facilities

1961

Type Facility	Number			Av. Daily Census (1000's)	Occupancy (percent)	Av. Length Stay (days)
	Hospitals	Beds (1000's)	Admissions (1000's)			
All Hospitals	6,923	1,670	25,474	1,393	83.4	-
Non-Federal						
Short-term general and other special	5,460	659	23,375	489	74.3	7.6
Voluntary	3,305	458	16,974	349	76.1	7.6
Proprietary	848	38	1,566	25	65.4	5.8
State and local governmental	1,307	162	4,835	116	71.5	8.8
Psychiatric	483	715	376	654	91.6	-
Tuberculosis	222	49	65	36	73.6	-
Long-term general and other special	321	71	155	60	84.8	-
All Federal	437	178	1,503	153	86.4	-

Source: Report of the American Hospital Association - Public Health Service - Areawide Planning of Facilities for Long Term Treatment and Care - PHS N 930-B-1, February 1963, p. 61.

Table 22 Hospital Utilization - Short Term*

Table 22. Hospital Utilization - Short Term*
1951 - 1961

(Non-Federal Short-Term General and Other Special Hospitals**)

Year	Hospital Beds		Average Daily Census		Admissions During Year	
	Number in Thousands	Per 1,000 Population	Number in Thousands	Per 1,000 Population	Number in Thousands	Per 1,000 Population***
1951	516	3.4	378	2.5	16,677	110.4
1952	531	3.5	385	2.5	17,413	113.5
1953	546	3.5	394	2.5	18,098	116.0
1954	553	3.5	393	2.5	18,392	115.6
1955	568	3.5	407	2.5	19,100	117.7
1956	586	3.5	425	2.6	20,107	121.6
1957	595	3.5	438	2.6	21,002	124.7
1958	610	3.6	451	2.6	21,684	126.5
1959	620	3.6	462	2.6	21,605	123.7
1960	639	3.6	477	2.7	22,970	128.9
1961	659	3.6	489	2.7	23,375	129.0

*Excludes Newborn Infants and Nursery Accommodations.
**Excludes Psychiatric and Tuberculosis Hospitals.
***Refers to Civilian Non-institutional Population.

Source: American Hospital Association IN Source Book of Health Data, Health Insurance Institute. 1962, page 69. (13)

Table 23. Hospital Utilization - Mental Patients
1935 - 1960

Year	Patients in Hospitals for Mental Disease					Patients in Institutions for Mental Defectives and Epileptics			
	Total		VA Hospitals	Public Hospitals	Private Hospitals	Total		Public Institutions	Private Institutions
	Number of Patients	Rate[1]				Number of Patients	Rate[1]		
1951	421,446	331.2	22,269	388,535	10,642	97,439	76.6	93,150	4,289
1952	483,448	367.2	32,227	440,543	10,678	104,784	79.6	101,164	3,620
1953	519,593	407.3	43,239	463,254	13,100	119,232	93.5	113,376	5,856
1954	578,130	384.9	51,553	512,501	14,076	135,082	89.9	128,145	6,937
1955	631,503	389.1	57,991	558,922	14,590	151,087	93.1	143,548	7,539
1956	625,566	378.4	60,080	551,390	14,096	154,179	93.3	146,241	7,938
1957	621,412	369.1	59,240	548,626	13,546	158,365	94.1	150,509	7,856
1958	619,508	361.4	59,855	545,182	14,471	161,815	94.4	153,699	8,116
1959	616,384	353.1	60,805	541,883	13,696	165,889	95.0	157,736	8,153
1960 (Prel.*)	609,795	342.3	60,204	535,796	13,795	168,486	94.6	160,705	7,181

[1]Rate per 100,000 population estimated as of July 1. Total population used for 1935; civilian population thereafter.
*Includes Alaska

Source: Department of Health, Education, and Welfare, Public Health Service, Patients in Mental Institutions and Mental Health Statistics and Current Reports, and Veterans Administration. IN Statistical Abstract of the United States, 1962, U.S. Department of Commerce, Bureau of Census.

Table 4. Nursing Home Utilization
1954

Type of Facility	Homes					Beds				
	Total	Proprietary	Non-proprietary			Total	Proprietary	Non-proprietary		
			Total	Volun.	Public			Total	Volun.	Public
Total	25,000	20,700	4,300	2,600	1,700	450,000	232,000	217,900	120,100	97,800
Skilled Nursing Homes	7,000	6,400	600	400	200	180,000	127,300	52,700	24,800	27,900
Personal Care Homes										
With Skilled Nursing	2,000	1,300	700	500	200	80,000	19,600	60,400	37,100	23,300
Without Skilled Nursing	7,000	5,600	1,400	900	500	110,000	51,400	58,600	30,300	28,300
Sheltered Homes	9,000	7,400	1,600	800	800	80,000	33,700	46,200	27,900	18,300

Source: Nursing Homes, Their Patients and Their Care.
Public Health Monograph No. 46, January 1957.

Table 25. Average Annual Number of Patients Discharged per 1,000 Noninstitutionalized Population

Region and Age	Both Sexes	Male	Female
All Regions			
All Ages	114.9	87.5	140.9
0-14	62.9	66.8	58.8
15-24	154.4	68.3	231.4
25-44	147.3	78.9	210.2
45-64	115.8	113.3	118.2
65+	145.6	165.0	129.6
Northeast			
All Ages	106.3	83.1	128.1
0-14	69.3	76.1	62.8
15-24	122.8	64.6	195.1
25-44	133.6	67.3	194.8
45-64	99.3	99.7	98.9
65+	122.6	140.5	108.8
North Central			
All Ages	117.5	85.3	149.0
0-14	61.8	61.6	62.0
15-24	164.5	67.1	253.1
25-44	147.9	74.5	219.0
45-64	124.5	116.7	132.3
65+	148.6	169.2	130.9
South			
All Ages	116.5	90.5	140.5
0-14	57.4	63.0	51.6
15-24	154.6	75.8	224.1
25-44	155.0	88.8	213.5
45-64	122.2	122.5	121.7
65+	155.2	167.7	144.9
West			
All Ages	121.4	93.7	147.6
0-14	66.5	71.5	61.2
15-24	170.6	60.0	283.0
25-44	155.2	90.6	213.0
45-64	117.7	113.9	121.0
65+	165.3	196.2	138.1

Source: Health Insurance Date 1962, Health Insurance Institute, 488 Madison Avenue, New York, New York 10022

SECTION C. POPULATION CHARACTERISTICS AND TRENDS

The health statistics in this report are based on the population characteristics -- age, sex and geographical locations -- at the time the National Health Survey was made.

It is believed that these figures are adequate to predict future health conditions and health needs within the population in keeping with population trends. A picture of this situation can best be seen in the description of Population Trends, National and State (Data from the Office of Aging, Ref. 21) which follows.

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POPULATION TRENDS, NATIONAL AND STATE, 1950-1960-1970

National Trends

1950-1960

In the 10 years between the 1950 and 1960 censuses, the population grew fastest at the two extremes of the age scale—we grew both younger and older. The number of persons under 18 and the number 65 and over increased almost twice as fast (36.7% and 34.7%, respectively) as did the total population (18.5%), while the in-between group, 18-64, increased less than half as fast (7.1%). In fact, there were actually less people aged 20-29 in 1960 than in 1950. For the first time in our history, there was a

Table 1.—The aging population: National trends, 1950-1960 and projections for 1970[1]

[Numbers in thousands]

Age	Number			Percentage Distribution			Percent Change	
	1950	1960	1970	1950	1960	1970	1950-1960	1960-1970
All ages	151 326	179 323	213 547	100 0	100 0	100 0	+18 5	+19 1
Under 18	46 967	64 202	78 849	31 0	35 8	36 9	+36 7	+22 8
Under 5	15 245	20 321	24 597	10 7	11 3	11 5	+25 1	+21 0
5 17	30 724	43 881	54 252	20 3	24 5	25 4	+42 8	+23 6
18-64	92 064	98 562	114 660	60 9	55 0	53 7	+7 1	+16 3
18 21	6 587	9 213	14 429	4 4	5 1	6 8	+39 9	+56 6
22 64	85 476	89 349	100 231	56 5	49 8	46 9	+4 5	+12 2
65 and over	12 295	16 560	20 040	8 1	9 2	9 4	+34 7	+21 0

See footnotes at end of Table 4

110
63221
2/63
N (2)

decrease in the median age of the total population (from 30.2 to 29.5 years). The slower rate of increase in the 18-64 age group was accounted for by the low birth rates during the depression and early World War II years and the fact that the number of persons 45 through 64 increased at a slightly lower rate (17.4%) than did the total population.

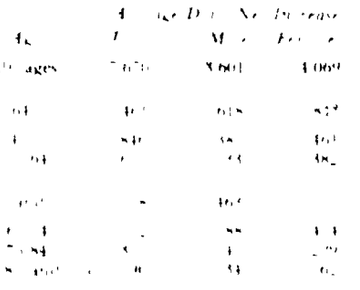
As a result of these age variations in rate of growth, the proportion of the total population under 18 increased from 31.0 to 35.8%, the proportion 65+ rose from 8.1 to 9.2%, while the proportion 18-64 dropped from 60.9 to 55.0%.

The excess of women over men increased both numerically and proportionately, with the largest increases in the upper age brackets. In the total population, women accounted for 53% of the 10-year increase so that their proportion of the total population increased from 50.3 to 50.8% or 103 women per 100 men. In the 45-64 age group, women represented almost 58% of the increase, raising the proportion of women in this age group from 50% in 1950 to 51.1% or 105 women per 100 men in 1960. In the 65+ group, women made up more than 60% of the increase; their proportion increased from 52.7% to 54.7% or 121 women per 100 men in 1960.

In 1960, the number of women per 100 men in the middle-aged and older groups was as follows:

45-54. 103
55-64. 107
65-74. . . . . .
75-84. . . . . .
85- and over. . .15/

In summary, during the 1950-60 decade, total population increased almost 28 million (13 million men and almost 15 million women) to 179.3 million; the number aged 45-64 increased 5.3 million (about 2.3 million men and 3 million women) to 36.1 million; while the number aged 65+ increased 4.3 million (1.7 million men and 2.6 million women) to 16.6 million. The increases were, of course, not at a uniform rate throughout the 10-year period but can be more easily envisioned and compared if translated into the average net increase each day, as follows:



Projection 1960-1970

If the assumptions underlying the projections of population trends to 1970 are borne out, total population will continue to increase at approximately the same rate in the 1960-70 decade (19.1%) as was true for the 1950-60 decade (18.5%). The rate of increase in the younger (under 18) and older (65+) age groups, however, will show a very marked decline to slightly over the rate for the total population as compared with almost twice the rate for the total population in the 1950-60 period.

In both the under 18 and the 65+ groups, the rate of increase in 1960-70 (22.8% and 21.0% respectively) will be only two-thirds of the rate in 1950-60 (36.7% and 34.7). The proportion of the total population in the under 18 category will increase slightly (from 35.8 to 36.9%) as compared with the larger increase between 1950 and 1960 (from 31.0 to 35.8%). Similarly, the proportion aged 65+ will show a much smaller increase between 1960 and 1970 (from 9.2 to 9.4%) than in the previous decade (from 8.1 to 9.2%).

The rate of increase in the number of persons in the in-between ages, 18-64, while double the rate between 1950 and 1960 (16.3% as compared with 7.1%), will still be smaller than that for the total population so that the proportion of the total population in the 18-64 age group in 1970 will show a decline from 1960 (from 55.0 to 53.7%) but not as great as the drop from 1950 to 1960 (from 60.9 to 55.0%). Although the rate

of increase in the proportion of the total population aged 65+ will slow down, the number of older persons will still increase by approximately 3.5 million with the fastest rate of growth in the oldest brackets.

Separate State projections for males and females were not prepared but the assumed continuation of present death rates indicates that the existing excess of women over men will not only continue but will become even larger.

Conclusions for Program Planners

1. Not only is the number of persons 65 years of age and over increasing but it is increasing at a faster rate than the total population. Thus the proportion of older persons in the population is increasing as well. Furthermore, the highest proportionate increases are in the oldest age brackets. By 1970, there will be more than 20 million persons 65+ and they will, on the average, be older than the present 65+ group. Moreover, since these projections are based on current death rates, any medical breakthroughs in the three diseases which are the most common causes of death among middle-aged and older people (heart, cancer, stroke) could bring dramatic increases in the number of older persons in the population.

2. In 1960, there were 121 women per 100 men aged 65+. Since life expectancy for women is greater than for men and since recent increases in life expectancy have been greater for women than for men, both the present numerical and proportional excess of women over men will continue to grow. Moreover, the highest rate of increase is among the oldest groups in the older population; for example, the 1960 excess of 57 women for every 100 men aged 85 and over will grow even larger.

3. If a theoretical "dependency ratio" is defined as the relation between persons aged 18 through 64 and those both younger and older, the 1960-70 trend indicates further addition of responsibility for the middle group. In 1950, there were 155 persons aged 18-64 per 100 persons under 18 and 65 and over. By 1960, this ratio had decreased to 122 and may go to 116 by 1970. This decline in the theoretic ratio arises from the fact that the younger and older groups are increasing faster than the middle group. While of significance to program planners, the ratio does not mean that all persons under 18 and 65 and over are dependent in the economic sense, nor does it take into account the increasing productivity or the ability of the national economy to provide the goods and services needed by the total population.

State Trends

1950-1960

National trends in growth of population, as summarized above, represent an averaging out of the widespread differences among the States. Whereas the total population of the U.S. increased 18.5% between 1950 and 1960, four States showed net decreases (Arkansas, District of Columbia, Mississippi, West Virginia), and the remaining States had increases ranging from as little as two or three percent (Kentucky, North Dakota, Vermont) to more than 70% (Alaska, Arizona, Florida, Nevada). In the 65+ age group, every State, including those that had less total population in 1960 than in 1950, showed net increases ranging from less than 15% in three States (Alaska, Maine, Vermont) to more than 100% (Arizona, Florida).

Except for Alaska, Delaware and Nevada, the older population of each State grew faster than the total population, thus increasing the proportion of older people in the State. If this proportion is considered a rough measure for comparison among the

States, another facet of State variations is disclosed. While the proportion of older persons in the nation as a whole increased 1.1 percentage points (from 8.1 to 9.2%), the three States previously mentioned showed decreases in their proportion of older persons ranging from 0.3 (Delaware) to 1.3 (Alaska) percentage points. The remaining 48 States showed increases ranging from 0.3 percentage points in California, Colorado, Maryland, and Ohio, to 2.4 points in West Virginia, 2.6 in Florida, and 3.1 in Arkansas.

In 1950, the proportion of older persons was less than 5% in three States (Alaska, Hawaii, New Mexico) but 10% or more in seven States (Iowa, Kansas, Maine, Massachusetts, Missouri, New Hampshire, and Vermont). By 1960, the proportion was less than 5% in only two States (Alaska and Hawaii) but 10% or more in 18 States. Of these 18 States, nine had 11% or more (the seven States with 10% or more in 1950 and Florida and Nebraska) while nine had between 10 and 11% (Arkansas, Minnesota, New York, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, and Wisconsin).

Projection 1960-1970

As was true in the 1950-60 decade, national trends mask considerable differences among the States but in the 1960-70 period the differences are not expected to be quite as widespread. For total population, of the 47 States that are expected to show continued growth in 1960-70, all will show changes in the rate of growth, but 29 States will change in the direction of approaching the U.S. average rate, while 18 will move away from the average rate. Of the four States that had lost population between 1950 and 1960, however, three (Arkansas, Mississippi, and West Virginia) are expected to show greater rates of decrease between 1960 and 1970 and one (District of Columbia) is expected to experience a reversal and show a slight increase in total population. The States which had shown remarkable rates of increase (70% or more) in 1950-60 will continue rapid growth but the rate will slow down to increases of approximately 50%.

All States will have increases in their population aged 65+ but, as is true for the total population, the rates of increase are slower than for 1950-60 and tend to approach the U.S. average. If the proportion of each State's population which is aged 65+ is used as a basis of comparison, the differences between the States within the slowdown in the rate of increase in the older population becomes more evident since this proportion takes into account the rate of growth in both total population and older population within each State.

Between 1950 and 1960, only three States showed decreases in their proportion of older persons in their total population. Between 1960 and 1970, 14 States will show such decreases, ranging from 0.1 percentage points in Massachusetts to 1.4 points in Nevada. Four States (Alaska, Illinois, Utah, Virginia) will show no change. Thirty-three States will show increases ranging from 0.1 percentage points in five States to 2.3 points in Arkansas. If increasing proportions of older persons can be considered indications of the need for more attention to possible needs, facilities, and programs, the large majority of the States will continue to experience the need to devote more attention to this segment of their population.

Between 1960 and 1970, the number of States with 10% or more of their population aged 65 and over is expected to increase from 18 to 21, with Kentucky, North Dakota, and West Virginia joining the 18 States which already had 10% or more in 1960. Of these 18 States, 13 will show further increases in their proportions while 5 will show decreases. In 1960, no State had as much as 12% of its population in the 65+ group; in 1970, there will be four States with 12% or more: Iowa, 12.3; Nebraska, 12.5; Florida, 12.8; and Arkansas, 13.2.

Table 2.—The aging population: State trends, 1950-1960 and projections for 1970[1]

(Numbers in thousands)

State	1950			1960				1970			
	All ages (000)	65 and over		All ages		65 and over		All ages		65 and over	
		Number (000)	% of total	Number (000)	Change over 1950	Number (000)	Change over 1950	% of total	Number (000)	Change over 1960	Number (000)	Change over 1960	% of total
Total 51 States[2]	151 326	12 295	8 1	179 323	+18 5	16 560	+34 7	9 2	213 547	+19 1	20 040	+21 0	9 4
Alabama	3 062	199	6 5	3 267	+6 7	261	+31 5	8 0	3 436	+5 2	305	+16 8	8 9
Alaska	129	5	4 7	226	+75 8	5	+13 6	2 4	339	+49 9	8	+48 5	2 4
Arizona	750	44	5 9	1 302	+73 7	90	+103 9	6 9	2 011	+54 4	145	+60 7	7 2
Arkansas	1 910	149	7 8	1 786	−6 5	194	+30 5	10 9	1 599	−10 5	211	+8 6	13 2
California	10 586	895	8 5	15 717	+48 5	1 376	+53 8	8 8	22 029	+40 2	1 755	+27 5	8 0
Colorado	1 325	116	8 7	1 754	+32 4	158	+36 8	9 0	2 266	+29 2	189	+19 5	8 3
Connecticut	2 007	177	8 8	2 535	+26 3	243	+37 2	9 6	3 235	+27 6	301	+24 1	9 3
Delaware	318	26	8 3	446	+40 3	36	+35 8	8 0	602	+34 9	42	+17 5	7 0
District of Columbia	802	57	7 1	764	−4 8	69	+22 0	9 1	803	+5 1	74	+7 0	9 2
Florida	2 771	237	8 6	4 952	+78 7	553	+132 9	11 2	7 552	+52 5	963	+74 1	12 8
Georgia	3 445	220	6 4	3 943	+14 5	291	+32 3	7 4	4 450	+12 9	342	+17 7	7 7
Hawaii	500	20	4 1	633	+26	29	+42 8	4 6	770	+21 7	36	+23 1	4 7
Idaho	589	44	7 4	667	+13 3	58	+33 8	8 7	755	+13 2	70	+20 2	9 3
Illinois	8 712	754	8 7	10 081	+15 7	975	+29 2	9 7	12 047	+19 5	1 166	+19 6	9 7
Indiana	3 934	365	9 2	4 662	+18 5	446	+23 4	9 6	5 567	+19 4	498	+11 8	8 9
Iowa	2 621	273	10 4	2 758	+5 2	328	+20 0	11 9	2 896	+5 0	357	+8 9	12 3
Kansas	1 905	194	10 2	2,179	+14 3	240	+23 7	11 0	2 490	+14 3	269	+12 0	10 8
Kentucky	2 945	235	8 0	3 038	+3 2	292	+24 3	9 6	3,103	+2 1	323	+10 5	10 4
Louisiana	2 684	177	6 6	3,257	+21 4	242	+36 6	7 4	3 938	+20 9	297	+22 9	7 5
Maine	914	94	10 2	969	+6 1	107	+13 9	11 0	1 046	+7 9	110	+3 2	10 5
Maryland	2 343	164	7 0	3 101	+32 3	227	+38 5	7 3	4 053	+30 7	285	+25 8	7 0
Massachusetts	4,691	468	10 0	5 149	+9 8	572	+22 0	11 1	5 799	+12 6	639	+11 8	11 0
Michigan	6 372	462	7 2	7 823	+22 8	638	+38 2	8 2	9 643	+23 3	809	+26 8	8 4
Minnesota	2 982	269	9 0	3 414	+14 5	354	+31 7	10 4	3 963	+16 1	428	+20 8	10 8
Mississippi	2 179	153	7 0	2 178	(4)	190	+24 2	8 7	2 124	−2 5	206	+8 4	9 7
Missouri	3 955	407	10 3	4,320	+9 2	503	+23 6	11 7	4 811	+11 4	569	+13 0	11 8
Montana	591	51	8 6	675	+14 2	65	+28 6	9 7	779	+15 4	77	+17 7	9 9
Nebraska	1 326	130	9 8	1 411	+6 5	164	+25 9	11 6	1 493	+5 8	187	+13 9	12 5
Nevada	160	11	6 9	285	+78 2	18	+65 4	6 4	437	+53 2	22	+21 1	5 0
New Hampshire	533	58	10 8	607	+13 8	68	+17 2	11 2	698	+15 0	72	+6 3	10 3
New Jersey	4 835	394	8 1	6 067	+25 5	560	+42 2	9 2	7 655	+26 2	718	+28 1	9 4
New Mexico	681	33	4 9	951	+39 6	51	+55 1	5 4	1 302	+36 9	71	+38 5	5 5
New York	14 830	1 258	8 5	16 782	+13 2	1 688	+34 1	10 1	19 334	+15 2	2 052	+21 6	10 6
North Carolina	4 062	225	5 5	4 556	+12 2	312	+38 6	6 9	5 003	+9 8	378	+21 1	7 6
North Dakota	620	48	7 8	632	+2 1	59	+21 6	9 3	634	+0 2	64	+9 2	10 1
Ohio	7 947	709	8 9	9 706	+22 1	897	+26 5	9 2	11 933	+22 9	1 027	+14 5	8 6
Oklahoma	2 233	194	8 7	2 328	+4 3	249	+28 3	10 7	2 390	+2 7	281	+12 9	11 8
Oregon	1 521	133	8 7	1 769	+16 3	184	+38 1	10 4	2 019	+14 2	223	+21 4	11 0
Pennsylvania	10 498	887	8 4	11 319	+7 8	1 129	+27 3	10 0	12 336	+9 0	1,310	+16 1	10 6
Rhode Island	792	70	8 9	859	+8 5	90	+27 2	10 4	944	+9 8	102	+13 9	10 8
South Carolina	2 117	115	5 4	2 383	+12 5	151	+30 9	6 3	2,628	+10 3	173	+14 9	6 6
South Dakota	653	55	8 5	681	+4 3	72	+29 3	10 5	700	+2 9	83	+16 1	11 9
Tennessee	3 292	235	7 1	3 567	+8 4	309	+31 5	8 7	3,810	+6 8	359	+16 2	9 4
Texas	7,711	513	6 7	9 580	+24 2	745	+45 2	7 8	11 854	+23 7	968	+29 9	8 2
Utah	689	42	6 2	890	+29 3	60	+41 3	6 7	1 136	+27 6	76	+26 8	6 7
Vermont	378	40	10 5	390	+3 2	44	+10 6	11 2	406	+4 1	44	+0 6	10 8
Virginia	3 319	215	6 5	3 967	+19 5	289	+34 7	7 3	4,659	+17 4	339	+17 3	7 3
Washington	2 379	211	8 9	2,853	+19 9	279	+32 0	9 8	3 408	+19 4	327	+17 2	9 6
West Virginia	2 006	139	6 9	1,860	−7 2	173	+24 5	9 3	1 650	−11 3	176	+2 0	10 7
Wisconsin	3 435	310	9 0	3 952	+15 1	403	+29 9	10 2	4,624	+17 0	482	+19 7	10 4
Wyoming	291	18	6 3	330	+13 6	26	+42 6	7 8	385	+16 6	34	+31 2	8 8

See footnotes at end of Table 4

Table 3.—Percent of State's total population aged 65 and over, with ranking of States, 1950, 1960, and 1970[1], by State

State	Percent			Rank[2]		
	1950	1960	1970	1950	1960	1970
Total, "51 States"[3]	8.1	9.2	9.4			
Alabama	6.5	8.0	8.9	*41	*36	*31
Alaska	3.7	2.4	2.4	51	51	51
Arizona	5.4	6.9	7.2	46	*44	43
Arkansas	7.8	10.9	13.2	*29	10	1
California	8.5	8.8	8.0	*22	31	38
Colorado	8.7	9.0	8.3	*16	30	36
Connecticut	8.8	9.6	9.3	15	*22	*28
Delaware	8.3	8.0	7.0	26	*37	*44
District of Columbia	7.1	9.1	9.2	*35	29	30
Florida	8.5	11.2	12.8	*20	*4	2
Georgia	6.4	7.4	7.7	43	*40	39
Hawaii	4.1	4.6	4.7	50	50	50
Idaho	7.4	8.7	9.3	31	*32	*29
Illinois	8.7	9.7	9.7	*17	*20	*23
Indiana	9.2	9.6	8.9	9	*23	*32
Iowa	10.4	11.9	12.3	3	1	4
Kansas	10.2	11.0	10.8	*5	*8	*10
Kentucky	8.0	9.6	10.4	28	*24	*18
Louisiana	6.6	7.4	7.5	40	*41	41
Maine	10.2	11.0	10.5	*6	*9	17
Maryland	7.0	7.3	7.0	*35	*42	*45
Massachusetts	10.0	11.1	11.0	7	7	*8
Michigan	7.2	8.2	8.4	32	35	35
Minnesota	9.0	10.4	10.8	*10	*13	*11
Mississippi	7.0	8.7	9.7	*36	*33	*24
Missouri	10.3	11.7	11.8	4	2	*6
Montana	8.6	9.7	9.9	*21	*21	22
Nebraska	9.8	11.6	12.5	8	3	3
Nevada	6.9	6.4	5.0	*37	47	49
New Hampshire	10.8	11.2	10.3	1	*5	20
New Jersey	8.1	9.2	9.4	27	*27	*26
New Mexico	4.9	5.4	5.5	49	49	48
New York	8.5	10.1	10.6	*23	17	*15
North Carolina	5.5	6.9	7.6	47	*45	40
North Dakota	7.8	9.3	10.1	*30	*25	21
Ohio	8.9	9.2	8.6	*12	*28	34
Oklahoma	8.7	10.7	11.8	*18	11	*7
Oregon	8.7	10.4	11.0	*19	*14	*9
Pennsylvania	8.4	10.0	10.6	25	18	*16
Rhode Island	8.9	10.4	10.8	*13	*15	*12
South Carolina	5.4	6.3	6.6	48	48	47
South Dakota	8.5	10.5	11.9	●*24	13	5
Tennessee	7.1	8.7	9.4	*34	*34	*27
Texas	6.7	7.8	8.2	39	*37	37
Utah	6.2	6.7	6.7	45	46	46
Vermont	10.5	11.2	10.8	2	*6	*13
Virginia	6.5	7.3	7.3	*42	*43	42
Washington	8.9	9.8	9.6	*14	19	25
West Virginia	6.0	9.3	10.7	*38	*26	14
Wisconsin	9.0	10.2	10.4	*11	16	*19
Wyoming	6.3	7.8	8.8	44	*39	33

See footnotes at end of Table 1

Table 4.—Percent of State's total population aged 65 and over, 1950, 1960, and 1970[1], by State in order of rank[5]

Rank	1950 State	1950 Percent	1960 State	1960 Percent	1970 State	1970 Percent	Rank
1	New Hampshire	10 8	Iowa	11 9	Arkansas	13 2	1
2	Vermont	10 5	Missouri	11 7	Florida	12 8	2
3	Iowa	10 4	Nebraska	11 6	Nebraska	12 5	3
4	Missouri	10 3	Florida	11 2	Iowa	12 3	4
5	Kansas	10 2	New Hampshire	11 2	South Dakota	11 9	5
6	Maine	10 2	Vermont	11 2	Missouri	11 8	6
7	Massachusetts	10 0	Massachusetts	11 1	Oklahoma	11 8	7
8	Nebraska	9 8	Kansas	11 0	Massachusetts	11 0	8
9	Indiana	9 2	Maine	11 0	Oregon	11 0	9
10	Minnesota	9 0	Arkansas	10 9	Kansas	10 8	10
11	Wisconsin	9 0	Oklahoma	10 7	Minnesota	10 8	11
12	Ohio	8 9	South Dakota	10 5	Rhode Island	10 8	12
13	Rhode Island	8 9	Minnesota	10 4	Vermont	10 8	13
14	Washington	8 9	Oregon	10 4	West Virginia	10 7	14
15	Connecticut	8 8	Rhode Island	10 4	New York	10 6	15
16	Colorado	8 7	Wisconsin	10 2	Pennsylvania	10 6	16
17	Illinois	8 7	New York	10 1	Maine	10 5	17
18	Oklahoma	8 7	Pennsylvania	10 0	Kentucky	10 4	18
19	Oregon	8 7	Washington	9 8	Wisconsin	10 4	19
20	Florida	8 6	Illinois	9 7	New Hampshire	10 3	20
21	Montana	8 6	Montana	9 7	North Dakota	10 1	21
22	California	8 5	Connecticut	9 6	Montana	9 9	22
23	New York	8 5	Indiana	9 6	Illinois	9 7	23
24	South Dakota	8 5	Kentucky	9 6	Mississippi	9 7	24
25	Pennsylvania	8 4	North Dakota	9 3	Washington	9 6	25
26	Delaware	8 3	West Virginia	9 3			
27	New Jersey [4]	8 1	New Jersey [4]	9 2	New Jersey [4]	9 4	26
			Ohio [4]	9 2	Tennessee [4]	9 4	27
28	Kentucky	8 0			Connecticut	9 3	28
29	Arkansas	7 8	District of Columbia	9 1	Idaho	9 3	29
30	North Dakota	7 8	Colorado	9 0	District of Columbia	9 2	30
31	Idaho	7 4	California	8 8	Alabama	8 9	31
32	Michigan	7 2	Idaho	8 7	Indiana	8 9	32
33	District of Columbia	7 1	Mississippi	8 7	Wyoming	8 8	33
34	Tennessee	7 1	Tennessee	8 7	Ohio	8 6	34
35	Maryland	7 0	Michigan	8 2	Michigan	8 4	35
36	Mississippi	7 0	Alabama	8 0	Colorado	8 3	36
37	Nevada	6 9	Delaware	8 0	Texas	8 2	37
38	West Virginia	6 9	Texas	7 8	California	8 0	38
39	Texas	6 7	Wyoming	7 8	Georgia	7 7	39
40	Louisiana	6 6	Georgia	7 4	North Carolina	7 6	40
41	Alabama	6 5	Louisiana	7 4	Louisiana	7 5	41
42	Virginia	6 5	Maryland	7 3	Virginia	7 3	42
43	Georgia	6 4	Virginia	7 3	Arizona	7 2	43
44	Wyoming	6 3	Arizona	6 9	Delaware	7 0	44
45	Utah	6 2	North Carolina	6 9	Maryland	7 0	45
46	Arizona	5 9	Utah	6 7	Utah	6 7	46
47	North Carolina	5 5	Nevada	6 4	South Carolina	6 6	47
48	South Carolina	5 4	South Carolina	6 3	New Mexico	5 5	48
49	New Mexico	4 9	New Mexico	5 4	Nevada	5 0	49
50	Hawaii	4 1	Hawaii	4 6	Hawaii	4 5	50
51	Alaska	3 7	Alaska	2 4	Alaska	2 4	51

Data for 1950 and 1960 from the regular decennial censuses. Projections for 1970 adapted from *Financing Education in the 1960's*, Special Project on School Finance, Research Division, National Education Association, are based on certain assumptions as to national level of death rates and immigration and as to relation of State birth and death rates and percentage age distribution to national levels. In addition, births are assumed to continue at the 1955–57 average fertility level and net migration for 1960–70 is assumed to equal the total in the 1950–60 period.

[1] Computed on the basis of the rounded projections.

[4] Includes the 50 States and the District of Columbia.

[5] Decrease of less than one half of one percent.

[6] States are ranked in order of decreasing percentages; highest percentage is rank 1, lowest is rank 51. To avoid fractional rank numbers, States with identical percentages are arbitrarily ranked alphabetically within that percentage and such rank numbers are identified by an asterisk.

[5] Same as U. S. average.

[6] See footnote 5.

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Table 6-K. Death Rates for 59 Selected Causes, by Age, Color, and Sex: United States, 1959

(Data refer only to deaths occurring within the United States, including Alaska Excludes fetal deaths. Rates per 100,000 estimated midyear population residing in area for specified group. Numbers after causes of death are category numbers of the Seventh Revision of the International Lists, 1955)

CAUSE OF DEATH, COLOR, AND SEX	Total[1]	Under 1 year	1-4 years	5-14 years	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75-84 years	85 years and over
ALL CAUSES	939.1	2,944.5	107.0	46.8	106.5	148.0	295.8	732.7	1,712.1	4,043.4	8,642.3	20,275.1
Male	1,084.8	3,324.3	116.1	56.5	151.7	189.5	371.4	965.9	2,289.2	5,162.7	10,126.5	20,258.1
Female	797.6	2,551.7	97.5	36.6	61.9	108.0	224.0	509.5	1,175.5	3,067.9	7,509.6	20,247.5
White	932.5	2,580.1	93.7	44.3	99.1	125.1	256.5	672.4	1,611.7	3,917.1	8,739.7	21,[illegible]9.8
Male	1,079.7	2,940.9	101.5	53.9	144.2	163.6	330.5	909.0	2,203.0	5,041.7	10,265.3	21,548.6
Female	789.2	2,204.8	85.5	34.1	54.4	87.6	185.7	445.0	1,063.7	2,941.9	7,589.8	21,482.2
Nonwhite	991.3	5,020.2	185.9	65.0	159.1	327.8	649.3	1,295.3	2,798.1	5,836.3	7,271.4	9,738.0
Male	1,125.9	5,551.4	203.8	73.2	206.4	404.7	755.8	1,511.3	3,211.1	6,830.4	8,354.6	10,217.1
Female	863.5	4,489.1	167.8	52.7	114.2	260.3	555.6	1,097.6	2,404.5	4,917.8	6,334.4	9,352.9
Tuberculosis, all forms (001-019)	6.5	1.3	0.8	[illegible].2	0.6	2.8	5.4	10.1	16.7	26.6	33.3	39.7
Male	9.5	1.7	0.8	0.1	0.4	2.9	6.4	15.3	28.1	45.7	54.5	60.6
Female	3.6	0.9	0.9	0.2	0.8	2.7	4.4	5.1	6.1	9.9	17.1	24.6
White	5.5	0.8	0.5	0.1	0.4	1.4	3.6	8.0	14.2	24.1	31.5	38.5
Male	8.3	1.1	0.5	0.1	0.3	1.4	4.4	12.1	24.4	42.1	51.6	58.6
Female	2.8	0.5	0.6	0.1	0.4	1.4	2.9	4.0	4.7	8.5	16.3	24.2
Nonwhite	14.4	4.2	2.6	0.6	2.7	14.1	21.0	29.9	44.1	62.0	57.9	48.9
Male	19.4	5.3	2.4	0.4	1.6	15.4	25.0	45.8	67.1	95.9	90.8	75.6
Female	9.8	3.2	2.8	0.9	3.8	13.0	17.5	15.3	22.1	30.7	29.4	27.5
Tuberculosis of respiratory system (001-008)	6.0	0.5	0.3	0.0	0.5	2.5	5.1	9.6	15.8	25.2	31.6	37.6
Male	8.9	0.6	0.2	0.1	0.3	2.5	6.0	14.7	26.9	43.6	52.4	58.1
Female	3.2	0.4	0.3	0.0	0.6	2.5	4.1	4.7	5.4	9.2	15.8	22.8
White	5.2	0.3	0.1	0.0	0.3	1.2	3.5	7.7	13.6	23.0	30.1	36.4
Male	7.9	0.4	0.1	0.0	0.2	1.2	4.2	11.7	23.7	40.3	49.9	56.1
Female	2.5	0.2	0.2	0.0	0.3	1.3	2.8	3.8	4.2	7.9	15.1	22.4
Nonwhite	12.7	1.6	1.0	0.2	2.0	12.5	19.5	27.3	39.6	56.8	52.6	46.7
Male	17.4	1.4	0.7	0.2	1.2	13.3	23.2	42.6	61.5	88.9	83.7	73.2
Female	8.3	1.8	1.2	0.2	2.8	11.9	16.2	13.3	18.7	27.2	25.8	25.5
Tuberculosis, other forms (010-019)	0.5	0.8	0.6	0.1	0.2	0.3	0.3	0.5	0.9	1.4	1.6	2.1
Male	0.6	1.1	0.6	0.1	0.1	0.4	0.4	0.7	1.2	2.1	2.1	2.5
Female	0.4	0.5	0.6	0.2	0.2	0.2	0.2	0.4	0.7	0.8	1.8	1.8
White	0.3	0.5	0.4	0.1	0.1	0.1	0.2	0.3	0.6	1.1	1.4	2.1
Male	0.4	0.7	0.4	0.1	0.1	0.1	0.2	0.4	0.8	1.8	1.7	2.5
Female	0.3	0.3	0.4	0.1	0.1	0.1	0.1	0.2	0.5	0.6	1.2	1.8
Nonwhite	1.7	2.6	1.6	0.4	0.7	1.6	1.6	2.6	4.5	5.2	5.3	2.2
Male	2.0	3.9	1.7	0.2	0.3	2.2	1.9	3.3	5.7	7.0	7.1	2.4
Female	1.4	1.4	1.6	0.6	1.1	1.1	1.3	1.9	3.5	3.5	3.7	2.0

Syphilis and its sequelae (020-029)	1.7	0.6	0.0	0.0	0.1	0.2	0.5	2.2	6.0	9.9	9.6	9.1
Male	2.5	0.6	0	0.0	0.1	0.2	0.8	3.0	9.4	15.9	13.5	13.6
Female	1.0	0.5	0.0	0.0	0.1	0.1	0.3	1.4	2.8	4.6	6.7	5.8
White	1.3	0.2	0	0.0	0.0	0.1	0.3	1.2	4.2	8.3	8.5	8.5
Male	2.0	0.2	0	0.0	0.0	0.1	0.4	1.7	6.9	13.8	11.8	11.9
Female	0.7	0.3	0	0.0	0.0	0.1	0.2	0.7	1.7	3.6	6.0	6.0
Nonwhite	4.9	2.3	0.0	0.0	0.2	0.6	3.0	11.6	25.1	31.5	25.7	14.1
Male	6.7	3.2	0	0.0	0.3	0.9	4.4	15.2	35.7	45.3	35.5	26.8
Female	3.1	1.4	0.1	0.0	0.1	0.4	1.7	8.2	15.1	18.7	17.2	3.9
Dysentery, all forms (045-048)	0.2	4.5	0.3	0.1	0.0	0.0	0.1	0.1	0.2	0.3	0.8	1.4
Male	0.2	4.6	0.3	0.1	0.0	0.0	0.1	0.1	0.2	0.3	1.0	0.8
Female	0.2	4.4	0.3	0.0	0.0	0.1	0.1	0.0	0.1	0.3	0.5	1.8
White	0.2	2.9	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.7	1.4
Male	0.2	3.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.9	0.9
Female	0.1	2.6	0.3	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.5	1.8
Nonwhite	0.7	13.4	0.8	0.2	0.0	0.2	0.2	0.2	0.8	2.1	2.0	1.1
Male	0.8	12.3	0.9	0.1	0	0.2	0.2	0.4	1.3	2.2	2.8	0
Female	0.7	14.4	0.6	0.1	0.1	0.2	0.2	0	0.5	2.0	1.2	2.0
Scarlet fever and streptococcal sore throat (050,051)	0.1	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.5
Male	0.1	0.3	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.6
Female	0.1	0.5	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.4
White	0.1	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.5
Male	0.1	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.6
Female	0.1	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.4
Nonwhite	0.1	0.5	0.2	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.3	0
Male	0.1	0	0.2	0.0	0	0.1	0.1	0.2	0.3	0	0	0
Female	0.1	1.1	0.2	0.1	0.1	0	0.2	0.1	0.2	0.3	0.6	0
Diphtheria (055)	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0	0.0	0	0
Male	0.0	0.1	0.2	0.1	0.0	0.0	0	0.0	0	0.0	0	0
Female	0.0	0	0.2	0.1	0.0	0	0.0	0.0	0	0	0	0
White	0.0	0	0.2	0.1	0.0	0.0	0.0	0.0	0	0.0	0	0
Male	0.0	0	0.2	0.0	0.0	0.0	0	0.0	0	0.0	0	0
Female	0.0	0	0.2	0.1	0	0	0.0	0.0	0	0	0	0
Nonwhite	0.1	0.2	0.5	0.2	0.1	0	0	0	0	0	0	0
Male	0.2	0.4	0.6	0.3	0.1	0	0	0	0	0	0	0
Female	0.1	0	0.3	0.1	0 1	0	0	0	0	0	0	0
Whooping cough (056)	0.2	4.8	0.5	0.0	0	0	0	0	0.0	0.0	0	0.1
Male	0.1	3.7	0.4	0.0	0	0	0	0	0.0	0	0	0
Female	0.2	6.0	0.6	0.0	0	0	0	0	0	0.0	0	0.2
White	0.1	2.4	0.3	0.0	0	0	0	0	0.0	0.0	0	0.1
Male	0.1	1.8	0.2	0.0	0	0	0	0	0.0	0	0	0
Female	0.1	3.0	0.4	0.0	0	0	0	0	0	0.0	0	0.2
Nonwhite	0.7	18.5	1.7	0.0	0	0	0	0	0	0	0	0
Male	0.6	14.4	1.4	0	0	0	0	0	0	0	0	0
Female	0.9	22.5	2.1	0.0	0	0	0	0	0	0	0	0

[1]Figures for age not stated included in "Total" but not distributed among age groups.

Source: DHEW, Public Health Service, National Office of Vital Statistics, Mortality Statistics, Section 6, 1959.

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13 ABSTRACT

This study shows the nature and extent of chronic, acute and incapacitating conditions in the national population which will be affected by adverse shelter environmental factors. It was undertaken to indicate the nature and extent of such conditions which may be expected in the shelter population and to help emergency planners prepare shelters with adequate supplies, equipment, facilities and personnel to insure the best possible health of all persons.

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